## SECTION C - DESCRIPTIONS AND SPECIFICATIONS

STATEMENT OF WORK

**Items 0001, 0002, 0003, 0004, 0005:** The contractor shall provide services in accordance with the Section C Statement of Work (SOW) below and as further detailed in individual task orders. The task order Statements of Work will detail tasks that fall within the scope of the basic contract.

**Items 0006, 0007, 0008, 0009, 0010:** The contractor shall provide services in accordance with the Section C Performance based Statement of Work (PBSOW) below and as further detailed task orders. The task order Performance based Statements of Work will detail tasks that fall within the scope of the basic contract.

**Items 0011, 0012, 0013, 0014, 0015:** The contractor shall provide ODCs in accordance with the Section C Statement of Work below and as further detailed in the individual task orders. ODCs shall be provided in accordance with NAVAIR clause 5252.232-9509, and clause H-1 Restriction On The Direct Charging Of Material NAVAIR 5252.242-9514 (Variation)(Jul 2016).

**Item 0016, 0017:** The data to be furnished hereunder shall be in accordance with Exhibit A, DD Form 1423, Contract Data requirements List (CDRL), and the Section C SOW below and as further detailed in the individual task orders.

## C4I OPERATIONAL MAINTENANCE & ENGINEERING TRAINING (COMET)

## STATEMENT OF WORK (SOW) / PERFORMANCE BASED STATEMENT OF WORK

### 1.0 BACKGROUND

NAWCAD 4.11.3, Patuxent River, MD, is engaged in the research, development, design, integration, test and evaluation, deployment, training, technical management, and maintenance support for integrated Command, Control, Communications, Computers, and Intelligence (C4I) life-cycle engineering systems supporting various DoD and U.S. Navy sponsors to include NAVAIR, NAVSEA, and other DoD and Federal organizations. NAWCAD 4.11.3 engineering leverages communications and information systems emerging technologies, advanced interfaces, and innovative information management architectures on a variety of C4I systems and platforms to provide engineering and interactive information products to these clients.

### 2.0 SCOPE

This contract will leverage NAWCAD 4.11.3's core capabilities involving C4I engineering and information systems to provide innovative information management architectures relating to interactive information and learning products to support our warfighters. With the constant advancement of C4I warfighting technologies and the constant pressure placed not only on the reliability of the equipment, but also on the effectiveness of the warfighter in utilizing and maintaining this equipment, the contractor shall provide the engineering products, tools and support needed in responding to this environment. This SOW defines specific requirements relating to the in-service engineering and interactive products envisioned under this effort. As a general scope, the following statements encompass the Government's intentions on this contract:

- Analysis of Navy and DoD engineering data processes, policy implementation, and standards compliance requirements, including Maintenance Material Management (3M) processes.

- In-service engineering on C4I equipment suites that are found on board U.S. Navy's surface and subsurface warships involving various communication, weapon and operational mission systems throughout product design, development, deployment and life cycle support.
- Design and development of standards-based operations and maintenance engineering data architectures for DoD based C4I equipment.
- Design and development of safety improvement product tools using key concept and scenario-based approaches.
- Design and development of decision support product tools for installation, operation, maintenance, and safety of technical systems.
- Design and development of engineering performance aids and product tools using interactive multimedia.
- Development of engineering technical content, including methods and tools for markup, delivery, transformation, and management.
- Project estimation, planning, scheduling, and reporting.

## 3.0 APPLICABLE DOCUMENTS

The following specifications, standards, instructions, and directives are incorporated by reference; the list is not all inclusive. Compliance with the detail, standards, specifications or policy contained in these documents is essential in the performance of this contract. Unless otherwise specified, a reference to a military specification, standard, or handbook, or to an industry standard adopted by DoD, will be to the specific version listed in the DoD Index of Specifications and Standards in effect at the time task orders are awarded.

### 3.1 References:

- Joint Fleet Maintenance Manual- Rev C Change 1 (COMFLTFORCOMINST 4790.3 Rev C Change 4, 13 OCT 2015)
- Planned Maintenance System (PMS): Development of Maintenance Requirement Cards (MRC), Maintenance Index Pages, and Associated Documentation (MIL-P-24534A, 21 MAR 1991)
- Ship's Maintenance and Material Management (3M) Manual (NAVSEAINST 4790.8C, 14 MAR 2013)
- Ship's Maintenance and Material Management (3M) System Policy (OPNAVINST 4790.4E, 31 OCT 2007)
- Department of Defense Standard Practice: Reliability-Centered Maintenance (RCM) Process (MIL-STD-3034A, 29 APR 2014)
- Policy for Preparation and Standardization of NAVAIR S1000D IETMs (NAVAIRINST 4120.11A, 10 OCT 2012)
- International Specification for Technical Publications utilizing a Common Source Database (S1000D, Issues 3.0-4.1)
- DoN S1000D Technical Manual Quality Assurance Guidance (NSWCCD-20-TR-2010/01, MAR 2009)
- Performance Specification: Manuals, Technical, Quality Assurance Program; Requirements For (MIL-PRF-85337B, 11 APR 2012)

- Interactive Multimedia Instruction Developer's Guide (CENNAVAVNTECHTRA INSTRUCTION 1554.1, 27 JAN 14)
- Guidance for Acquisition of Training Data Products and Services (Part 1 of 5 Parts), (MIL-HDBK-29612/1A, 31 AUG 2001)
- Instructional Systems Development/Systems Approach to Training and Education (Part 2 of 5 Parts), (MIL-HDBK-29612/2A, 31 AUG 2001)
- Development of Interactive Multimedia Instruction (Part 3 of 5 Parts), (MIL-HDBK-29612/3A, 31 AUG 2001)
- Glossary for Training (Part 4 of 5 Parts), (MIL-HDBK-29612/4A, 31 AUG 2001)
- Advanced Distributed Learning (ADL) Products and Systems (Part 5 of 5 Parts), (MIL-HDBK-29612/5, 31 AUG 2001)
- US Fleet Cyber Command (FCC)/Space and Naval Warfare (SPAWAR) Command Navy Authorizing Official and Security Control Assessor Risk Management Framework Process Guide (Version 1.0, 31 AUG 2015)
- Risk Management Framework (RMF) for DoD Information Technology (IT), (DODI 8510.01, 12 MAR 2014)

## 4.0 TECHNICAL REQUIREMENTS

The contractor shall provide engineering and analysis of complex DoD based C4I systems relating to and supporting innovative and interactive information and learning products. The contractor shall support in-service engineering approaches as it relates to planned maintenance and training covering both currently deployed C4I systems, as well as new and emerging C4I systems still under development. This effort will include the design, development, implementation and training utilizing electronically based engineering processes for maintenance and training techniques on sophisticated military systems. These engineering solutions and interactive products will support the various C4I equipment suites that are found on board U.S. Navy's surface and subsurface warships, DoD based air platforms and ground systems involving various communication, weapon and operational mission systems. In providing the engineering and analysis for these innovative and interactive information and learning tool products, the contractor will also be required to interact with fleet personnel to ascertain not only inputs for the engineering design and development phases, but to also support fleet personnel in their daily duties of in-service engineering and maintenance support for the mission based electronic equipment.

The second work area to be covered by this SOW will require the contractor to produce quarterly logistics maintenance data packages and quarterly tailored logistics packages for C4I equipment covering planned maintenance on systems found on Navy/DoD platforms. These data packages will directly support fleet personnel in their daily shipboard duties of planned maintenance activities covering a wide range of C4I systems based communication and weapon system.

**ENGINEERING & ANALYSIS (NON-PERFORMANCE BASED)**

4.1 Maintenance Management Development (3M) (CLINs 0001, 0002, 0003, 0004, 0005)

The contractor shall support the NAVSEA 3M system. The system is used throughout the U.S. Navy Fleet as part of the in-service engineering, maintenance and reliability of installed C4I equipment by providing engineering management, readiness and reporting procedures for U.S. Navy equipment suites. This program includes in-service engineering processes and procedures for the Planned Maintenance System (PMS), database generation, user-interface development and modifications, development and reliability for 3M applications, and the development, distribution, and management of PMS technical documentation. The PMS system also provides procedures for scheduling and accounting for PMS tasks on board ships. NAVSEA04RM, Director of Maintenance Engineering holds the Technical Warrant for Reliability-Centered Maintenance (RCM) policy covering all NAVSEA based efforts that requires all maintenance developers to utilize MIL-STD-3034A methodologies to be NAVSEA RCM certified. NAVSEA requires RCM Level I (Backfit) certification for all personnel who develop, review, or approve changes to currently published maintenance tasks. Classic RCM (Level II) is required for this contract and covers those who develop, review, or approve maintenance requirements on new systems or equipment, or existing systems or equipment being used in a different application or arrangement. Classic RCM analysis is required during ship acquisition and during ship modernization alterations.

4.1.1 The contractor shall analyze PMS logistics packages for 3M systems including equipment maintenance requirements, PMS schedules, feedback reports, configuration change reports, procedural content, parts and material information, and distribution data. The contractor will access the data maintained by NAVSEALOGCEN quarterly in February, May, August, and November by accessing the NMCI portal. Data analysis will require efficiency in the use of the Configuration Data Management Database (Open Architecture (CDMD-OA) system), PMS Management Information System (PMS MIS), and Ships 3M History (Open Architectural Retrieval System (OARS). (CDRL A001)

4.1.1.1 The contractor shall provide procedural analysis of changes that may have occurred in Maintenance Requirement Cards (MRCs) to include updated procedures, warnings, cautions, notes, and Maintenance Index Page (MIP) scheduling changes affecting an MRC. New MRCs will need to be further evaluated to determine ship applicability and schedule impacts. This effort is conducted quarterly. (CDRL A001)

4.1.1.2 The contractor shall determine which MRCs apply to specific ship configurations across the Fleet quarterly. Analysis involves approximately 5 million configuration records, 35,000 distinct MRCs, 2,000 distinct MIPs, covering an estimated 140-160 ships. The contractor shall incorporate Navy maintenance policies, application of maintenance guidelines, and maintenance audit/inspection criteria. (CDRL A001)

4.1.1.3 As part of the data analysis of the various sources including shipboard data and shore based 3M and Navy Logistics data, the contractor will be required to develop standardized reports, dashboards and metric reports. (CDRL A001)

4.1.2 The contractor shall develop updates to 3M and Navy Logistics data structures including Document Type Definitions (DTD) and database schemas. Maintain the PMS procedure content model for MIPs and MRCs using Standard Generalized Markup Language (SGML/XML) DTD and XML Schemas. This includes data transformation scripts using eXtensible Style Language

for Transformations (XSLT) for presentation in NAVSEA approved viewers. Required outputs include on screen and printed layouts. The PMS DTD is the authoritative data structure used for storing PMS documents and 3M data. The contractor shall have the ability to adapt to the various presentation methods and approaches listed above. Key technologies include the Microsoft XML parser. (CDRL A008)

4.1.2.1 The contractor shall install Navy maintenance applications on the Navy Information and Application Product Suite (NIAPS) and Consolidated Afloat Networks and Enterprise Services (CANES). This also involves maintaining certification requirements for installation on these networks.

4.1.3 The contractor shall perform software engineering and life-cycle maintenance support for3M scheduling, viewing, and authoring applications. The contractor shall work with other Navy agencies and third-party software developers to define and implement required interface specifications. (CDRL A002, A003)

4.1.3.1 The contractor shall produce the following deliverables:

- Software requirements documentation (CDRL A002)
- Software design descriptions (CDRL A003)
- Database design descriptions (CDRL A004)
- Software test plans (CDRL A005)
- Software test reports (CDRL A006)
- Requirement traceability matrices (CDRL A001)
- Software user manuals (CDRL A007)

4.1.3.2 The contractor shall provide PMS applications development support for the SKED Maintenance Management and Scheduling System. This is a Fleet-wide (surface and subsurface) system to automate all scheduling and administrative tasks associated with the Navy PMS. Supporting Fleet Type Commanders (TYCOMs) in Norfolk and San Diego, the contractor shall assist NAWCAD 4.11.3 in providing total development support, including installation, configuration management, implementation of Fleet training, user technical support, business process revisions, and deployment planning. The use of SKED is mandatory for all Navy PMS schedules, including all ships in the Fleet, shore facilities, and intermediate maintenance facilities. The SKED software has been approved for use in Common PC Operating System Environment (COMPOSE)operating environments, and for use in the Navy Marine Corps Intranet (NMCI) infrastructure. As this maintenance and management software is utilized and maintained on all ship networks, the contractor shall be required to maintain the various versions of this Government based software. Key technologies include Visual Basic, Microsoft .NET, and SQL Server.

4.1.3.3 PMSViewer is a Fleet-wide Government based distributed software application to display and print all Navy PMS documentation. The software is distributed quarterly on CD/DVD configurations. NAWCAD 4.11.3 works closely with In Service Engineering Agents (ISEAs) and Commodity Specialists at Atlantic and Pacific based NAVSEA Logistics Centers

(NAVSEALOGCENs) to define PMS document style requirements conforming to OPNAV Instruction 4790. The PMSViewer uses XSLT to transform and display MIPs and MRCs provided in XML format. The PMSViewer application has been approved for use in the COMPOSE operating environments, and for use in the NMCI infrastructure. The contractor shall maintain this software. Key technologies include Visual C++ and Microsoft XML parser.

4.1.3.4 The Navy PMS Editor (NPE) Authoring System is a document authoring system for the PMS Program. The NPE Authoring System is the principal method used by Commodity Specialists and ISEAs to author PMS MRCs and MIPs. The software allows authors to create and edit complex engineering and technical documents stored as SGML in a simplified "What You See Is What You Get" user interface. The system is designed to be NMCI compliant. The contractor shall maintain this software. Key technologies include Visual C++ and Microsoft XML parser.

4.1.3.5 NAWCAD 4.11.3 is responsible for the maintenance of the PMS DTD. The PMS DTD is the authoritative data structure used for storing PMS documents and 3M data. NAWCAD 4.11.3 works with NAVSEA to ensure the integrity of the DTD and the contractor shall maintain the PMS DTD. Key technologies include the Microsoft XML parser.

4.1.4 As authorized by the Navy and as allowed by ship deployment schedules, the contractor shall conduct installation, training, and technical tasking of various 3M, technical manual, and other Navy logistics systems on board the Navy's surface and subsurface fleet. Tasking may include:

4.1.4.1 Install Navy maintenance applications on the Navy Information Application Product Suite (NIAPS)and Consolidated Afloat Networks and Enterprise Services (CANES). This also involves maintaining certification requirements for installation on these networks.

4.1.4.2 The contractor shall provide and can expect annually up to 100-125 on-site ship and shore installations, activations, configurations, and training of NAVSEA PMS Logistics applications. These activities must be coordinated with the appropriate fleet authorities and the current shipboard hosting agencies. (CDRL A012)

4.1.4.3 Provide, and report on, troubleshooting support services for PMS applications to meet fleet requirements via phone, e-mail, message or on-site visit. Troubleshooting support may vary based on new product roll out, engineering and software upgrades, or by the class of ship supported, however for estimating purposes, the Government would expect to see no more than 12 on-site requests and approximately 150-250 phone and/or email requests annually. (CDRL A001)

4.1.4.4 The contractor shall provide shipboard support in both Norfolk, VA, and San Diego, CA as needed. The contractor shall assist NAWCAD 4.11.3 in providing on-site support while the ship is in port for Ship Alterations (SHIPALTs), overhauls or other operational issues. Maintaining credibility with the crew and responsiveness to the fleet authorities is critical to the

success of this effort. The support effort can fluctuate based on fleet needs, ships in port, but response times and deployment to the ships many times can dictate a very narrow window to ensure proper support. The contractor must be prepared to handle surge capacities, response times and the flexibility that recognize the fleet's deployment needs.

4.1.5 Prepare Information Assurance documentation for application Certification and Accreditation (C&A) of Government software and systems as dictated by specific task orders in accordance with US Fleet Cyber Command (FCC)/Space and Naval Warfare (SPAWAR) Command Navy Authorizing Official and Security Control Assessor Risk Management Framework Process Guide. (CDRL A010)

4.2 Software Engineering, Development and Integration (CLINs 0001, 0002, 0003, 0004, 0005)

Typical software engineering, development and integration tasks include purchasing and evaluating new software and hardware technologies for innovative and enhanced interactive products and tools. Developing concept of operations, performing requirements analysis, system design, data conversion, development, quality assurance, deployment, and training to meet mission oriented requirements.

4.2.1 The contractor shall evaluate and report on emerging engineering and information technologies including innovative C4I engineering enhancements and technological pursuits, multimedia, user interfaces, technical data markup, and software development tools and techniques and recommend application of new technology for product improvement or cost reduction. In analyzing the benefits of these product improvements and cost reductions, the contractor will be required to maintain and report metrics that will support the benefit of these new tools and techniques. (CDRL A001)

4.2.2 The contractor shall recommend standards-based technical approaches that support Navy or DoD sponsored product development and develop technical specifications and Concepts of Operations (CONOPS) for automation of engineering processes based on the identified operational and functional performance requirements. (CDRL A001)

4.2.3 The contractor shall conduct detailed user requirements analyses to determine and document business processes, administrative, technical and software engineering support requirements (CDRL A002), and recommend deployment options and strategy. (CDRL A001)

4.2.4 The contractor shall design system architectures and products. Specifically, the contractor shall:

4.2.4.1 Translate client requirements to system design recommendations and provide database design descriptions, user interface layout, wireframes, storyboarding, prototypes and design documentation that support required deployment environments. (CDRL A009)

4.2.4.2 Design automation processes for the creation of technical engineering and performance support data for use in content delivery applications. (CDRL A003)

4.2.4.3 Support component and content reuse as part of software integration, including the following:

4.2.4.3.1 Object, module, or component reuse to enhance deployment flexibility and efficiency in stand-alone, network, and learning management system (LMS) applications. (CDRL A003)

4.2.4.3.2 Reusable content strategies implementing standard markup languages such as XML, S1000D, and SVG for storage in files, relational databases and content management repositories. Content shall be in conformance with NAVAIR policy and specification guidance or other standards required by NAWCAD 4.11.3 customers. (CDRL A003)

4.2.4.3.3 Transformation and rendering to enable the reuse of content with technologies such as XSLT and eXtensible Stylesheet Language-Formatting Objects (XSL-FO). (CDRL A003)

4.2.4.3.4 Adoption and adaptation of XML content models to accommodate data structures and documents for the storage, display, and print of data from content delivery and content management systems. (CDRL A003)

4.2.5 The contractor shall define, facilitate, and support data conversion processes for transformation of technical data of various types (e.g., technical manuals, engineering drawings, program data, etc.) to other standards and formats that comply with Navy policy and improve usability and reduce costs. (CDRL A003)

4.2.6 The contractor shall integrate, develop, and maintain software-based solutions and shall use Commercial Off-the-Shelf (COTS) or Government Off-the-Shelf (GOTS) products to the maximum extent possible. In addition to the wide variety of software program experience mentioned elsewhere in this SOW, the contractor may be required to support a wide variety of additional programming languages, web applications, web services, multimedia, prototyping, markup languages, data repositories, application frameworks, components, installations, and documentation methods as future tasking may require. In the event custom software is required, the contractor shall comply with applicable Navy, NAVAIR, NAVSEA, or other agency software development or purchasing requirements as specified by NAWCAD 4.11.3.

4.2.6.1 Software must be compliant with NMCI requirements, be approved for use in the DoN Application Database Management System (DADMS), and certified to run on ships' NIAPS/CANES networks as required. The contractor shall support compliance with DoD Information Assurance (IA) procedures and develop required documentation and accreditation when required. The contractor shall document and maintain IA artifacts in Enterprise Mission Assurance Support Service (eMASS). (CDRL A010)

4.2.6.2 In developing new software based products, the contractor shall develop interactive performance solutions to include reference, educational, or training systems with the goal of improving the efficiency and effectiveness of installation, operation, maintenance, and safety tasks. These products may be required to deliver content compliant with specific deployment standards and infrastructures. Content shall also be provided as XML or S1000D as specified by NAWCAD 4.11.3. (CDRL A008)

4.2.6.3 The contractor shall develop and maintain Shareable Content Object Reference Model (SCORM) compliant training modules for learning management systems such as Navy

Knowledge Online (NKO) and Marine Corps Aviation Learning Management System (MCALMS). Some of these products have a requirement to be game-based with a scoring mechanism. These products must run in a stand-alone format (from CD-ROM) or on customer based web sites. (CDRL A008)

4.2.6.4 The contractor shall develop Interactive Electronic Technical Manuals (IETMs) to include building customized IETM content for the NavXML IETM viewer using data transformations, XSLT scripts, and the NavXML Authoring tools. Content may use the NavXML XML DTD format or the NavXML implementation of S1000D. Other viewers that may be used include the NAVAIR Standard IETM Viewer (NSIV) and NAVSEA standard viewer, LiveContent. (CDRL A008)

4.2.6.5 The contractor shall provide knowledge management (KM) and virtual collaboration subject matter expertise and technical skills. This includes situational awareness of emerging technologies and methodologies in the field of KM. (CDRL A008)

4.2.6.6 The Government will own such software rights and any software developed, and the contractor shall deliver all source code, media files, configuration files, and programming documentation developed under this contract, including all ancillary files, required for the Government to maintain, document, and reproduce the product. (CDRL A008)

4.2.7 Quality Assurance (QA) and Testing: The contractor shall perform quality assurance and testing activities on developed software products and on resultant data outputs. Specifically, the contractor shall:

4.2.7.1 Define and document QA plans including roles, responsibilities, and tools for performing QA activities and ensuring quality products and services. QA Plans shall include requirements traceability, product version tracking, discrepancy tracking, and resolutions. (CDRL A017)

4.2.7.2 Develop the test plans and procedures necessary to verify the operational and technical parameters of developed and procured software. (CDRL A005)

4.2.7.3 Conduct testing protocols and document the results. Identify and document discrepancies, as well as the actions taken to resolve those discrepancies. (CDRL A006)

4.2.8 The contractor shall use standard content management products, processes, and delivery systems to support deployment requirements as dictated by specific task orders. In addition, the contractor shall be required to support the following content development strategies:

4.2.8.1 Integrate and customize authoring system software to automate the creation of technical engineering and performance support data for use in content delivery applications. (CDRL A008)

4.2.8.2 Integrate and customize content management tools and repositories to create, reuse, assemble, and publish content to a variety of outputs.

4.2.8.3 Provide publishing workflow management.

4.2.8.4 Integrate or develop software for performance support content creation using SGML/XML/S1000D and other applicable standards. (CDRL A008)

4.2.8.5 Package performance support content for Sharable Content Object Reference Model (SCORM) or Learning Management System (LMS) compliance with specified standards and deployment infrastructure. (CDRL A008)

4.2.8.6 Create software user manuals. (CDRL A007)

4.3 Engineering Support (CLINs 0001, 0002, 0003, 0004, 0005)

The contractor shall support engineering documentation development, review, and distribution of a wide variety of technical and knowledge based documents relating to:

- Operations Manuals
- Technical Manuals
- Maintenance And Repair Manuals
- Commercial and Military Equipment Specifications Manuals
- Commercial and Military Equipment Policy Manuals
- Engineering Drawings
- Equipment Alteration Drawings and Specifications
- Charts
- Maps

Specifically, the contractor shall:

4.3.1 Analyze technical document architectures and standards, training, planning and policy documents. Assess interoperability and implementation across applicable information systems. (CDRL A001)

4.3.2 Interface with DoD policy activities by reviewing draft documents, participating in planning processes, and recommending language that is consistent with practical and efficient software development practices. (CDRL A001)

4.3.3 Provide test, evaluation and support for implementation or review of DoD, Navy, and international standards initiatives. (CDRL A001)

4.3.4 Analyze information processing requirements relating to automation of maintenance support systems including data collection, documentation, and analysis. (CDRL A001)

4.3.5 Provide engineering inputs to interactive publications development for NAWCAD 4.11.3 and DoD operational communities. (CDRL A001)

4.4 Technical Support (CLINs 0001, 0002, 0003, 0004, 0005)

4.4.1 Establish and maintain reliable methods of communication with NAWCAD 4.11.3 to effectively and efficiently transfer information necessary to support the conduct of project and contract-related operations.

4.4.2 Communicate and coordinate with internal and external stakeholders on technical and programmatic issues, and collect feedback. Support internal and external working-level technical conferences and status meetings and provide meeting reports and trip reports. Perform the daily activities and ad hoc administrative actions associated with the execution of project tasks. (CDRLs A001, A012)

4.4.3 Develop and maintain planning documentation and conduct planning efforts necessary to identify, schedule, execute and monitor project-related tasks. This shall include program management plans, plans of action and milestones, change control management, project close-out reports, staffing plans and the input and maintenance of data in external planning databases. (CDRLs A011, A013, A014)

4.4.4 Prepare briefing materials to support meetings with peer groups or industry organizations such as Integrated Process Team (IPT) meetings, configuration control boards, other participating project entities, standards committees or commercial forums. (CDRL A009)

4.4.5 Collaborate with Government personnel to define the scope of assigned projects. Monitor the scope throughout the duration of the project to ensure effective and adequate methods are in place to proactively address and manage changes in project scope. This may require the development and maintenance of a change control database, scope management plans and work breakdown structures for specific projects.

4.4.6 Create, deliver, and manage project schedules for each project. This will include an initial project schedule within 30 days of task order startup, an intermediate project schedule at the end of the requirements analysis, and a detailed project schedule prior to beginning any development or integration. Project schedules will be updated monthly. (CDRL A013, A014)

4.4.7 Provide technical inputs to schedule, cost, and technical approach for current and future tasks for sponsor based efforts. This may require the implementation of change management techniques to accomplish the effective control of project cost and scope. (CDRL A011)

4.4.8 Establish, deliver, and execute processes and methods to effectively identify, communicate, and manage the risks associated with assigned projects. Ensure project risks are factored into decisions affecting other technical management areas such as cost and schedule. (CDRL A016)

4.4.9 Support process improvement initiatives for existing technical, management, and business processes to increase effectiveness, efficiency, quality and cost performance.

4.4.10 Provide organizational planning and development support to ensure that adequate organizational structures, processes, tools and skill sets are available to support assigned

projects. Typical efforts include strategic planning, organizational evaluations and organizational-level training.

4.4.11 Prepare and update management and process documentation in support of Task Order and projects and in accordance with standard quality management processes. (CDRL A001)

**LOGISTICS SUPPORT (PERFORMANCE BASED)**

4.5 3M and Navy Logistics Packages (CLINs 0006, 0007, 0008, 0009, 0010)

Supporting the 3M and Navy Logistics packages developed under SOW section 4.1, the contractor shall execute distribution, integration and training of these products to the Navy Fleet, air based platforms, shore activities, and international partners under the foreign military sales program, as tasking may require. In a performance based environment, the contractor shall support the design, production and quality review of approximately 400 quarterly DVD packages that could require distribution to each ship in the U.S. Navy. This includes logistics for approximately 2,000 activities, 15,000 work centers, and 40 different distribution titles. This package will consist of databases, spreadsheets, updated MIPs, updated MRCs, and reports. Force Revision packages are to be generated quarterly, and shall be provided to the fleet with updated PMS documentation. (CDRL A008)

4.5.1 Quarterly Force Revisions

4.5.1.1 The contractor shall process PMS data to produce four quarterly PMS Force Revisions annually. Quarterly Force Revisions consist of 15 - 45 PMS CD/DVD titles, and will involve the following:

- Process 78,000 - 90,000 PMS documents.
- Create PMS Change Indicator documents for each updated PMS document.
- Manage distribution of titles to control which documents go to which activities.
- Manage activity applicability to PMS titles to determine which titles go to which ships.

4.5.1.2 The contractor shall produce 4,400 - 7,500 disc images per Force Revision, and will involve the following:

- Force Revision discs shall comply with distribution statement D: Distribution authorized to DoD components and DoD contractors only.
- Force Revision disc images shall be duplicated at DoD or DoD contractor site.
- The contractor shall coordinate with Government representative to determine label requirements such as layout, distribution statement, art and color.

4.5.1.3 The contractor shall develop processes to ensure quality and correctness of each PMS title (CDRL A005).

4.5.1.4 The contractor shall compile data, processes, and produce PMS Force Revision discs to meet quarterly revision distribution schedule, due on the 1st Monday of March, June, September, and December. (CDRL A008)

4.5.2 Publish Quarterly Tailored Force Revisions (TFRs)

4.5.2.1 The contractor shall process PMS data to produce four quarterly TFRs (in December, March, June, and September). TFR production consists of 9 - 15 TFR titles, and will involve the following:

- Processing 75,000,000 - 80,000,000 MRC Active/Inactive Decisions
- Processing 4,500,000 - 5,500,000 equipment records
- Processing 32,000 - 35,000 distinct MRCs
- Processing 2,000 - 2,500 distinct MIPs
- Processing TFR data for 140 - 160 U.S. Navy ships covering CV, CG, DDG, FFG, L-Decks, LCS & MCM Class ships

4.5.2.2 The contractor shall produce 230 - 250 disc images per Tailored Force Revision, and will involve the following:

- TFR discs shall comply with distribution statement D: Distribution authorized to DoD components and DoD contractors only.
- TFR disc images shall be duplicated at DoD or DoD contractor site.
- The contractor shall provide processes to ensure quality and correctness of each TFR title.
- The contractor will coordinate with Government representative to determine label requirements such as layout, distribution statement, art and color.

4.5.2.3 Provide processes to ensure quality and correctness of each PMS title (CDRL A005).

4.5.2.4 The contractor shall deliver TFR packages 30 days from receipt of PMS data. (CDRL A008)

## 5.0 QUALITY MANAGEMENT

The contractor shall develop, implement, document, and maintain a quality management system to ensure conformance with contractual requirements and the specific quality and performance requirements of specific task orders to be issued under this contract. The quality management system shall meet the intent of the American National Standards Institute/American Society for Quality ANSI/ASQ ISO 9001:2008, and/or equivalent governing body. Regardless of the standards that are applied, the contractor's quality approach shall be clearly defined and recognize the need to focus on customer satisfaction, defect prevention over inspection, management responsibility and continuous improvement. (CDRL A017)

5.1 Inspection System Plan (ISP)

The contractor shall submit an Inspection System Plan (ISP) for approval not later than 15 days after contract award and first task order issued. The ISP may include generic contractor procedures, for the level of effort CLINs, however for the CPFF Performance Based Completion Integration effort, the ISP shall be specific regarding the work requirements stated in the SOW. (CDRL A018)

5.2 Planning Review

A thorough review of quality requirements shall be conducted to identify the controls, processes, skills, fixtures, tools, and test equipment needed to ensure product quality. The planning review shall also update inspection and testing techniques, instrumentation, and manufacturing methods and processes. Standard program data (test results, defects/failures identified, calibration results, etc.) that may be required by the Government to compile trend evaluation shall be available upon request. (CDRLs A017, A018)

5.3 Quality Management Plan

The contractor's Quality Management Plan should address all areas of work to be performed under the contract resulting from this solicitation to include hardware and software systems engineering, integration and installation, configuration management, logistics and contractor's method for monitoring and reporting on the identified metrics. As with the ISP, the Government, for the Performance based CLINs, is expecting a level of detail that indicates the contractor grasps the Integration scope and the metrics that will be used to evaluate performance. The contractor will be required to provide a final version of this plan after award. (CDRL A017)

5.4 Process Documentation

All processes used to fabricate, assemble, modify, install, deploy, and test products shall be documented and updated. These written procedures and work instructions shall be made available to the employees required to perform the specific task. All procedures and work instructions shall be consistent with the contractor's quality management system. (CDRL A001)

6.0 FACILITIES

6.1 Contractor-Provided Industrial Facility

6.1.1 Due to the need to be near the U.S. Navy Fleet, the preponderance of the tasking is expected to occur in Norfolk, VA. As such, the contractor shall have a facility or spaces within a 50-mile radius (driving distance) of Norfolk, VA. To support the overall management and coordination of tasks with NAWCAD 4.11.3, the Government may allow space to accommodate no more than 20 contractor employees on site at St. Inigoes, MD. The contractor shall provide details of spaces proposed, and they shall be of sufficient size and locations to cover personnel and equipment required by this SOW. Considering the IDIQ nature of this contract, the Government recognizes that the "indefinite quantity" aspects may require a contractor to propose a "phased in" approach to providing facilities under this effort.

6.1.2 This contract tasking requires close coordination (via telecom or travel) with activities listed below located in:

- Norfolk, VA
- San Diego, CA
- Groton, CT
- NAVSEA Logistics Center, Det. Norfolk, VA - PMS and RCM coordinating activity
- NAVSEA Logistics Center, Det. San Diego, CA - PMS coordinating activity
- U.S. Fleet Forces Command, Norfolk, VA
- Type Commanders (TYCOMS)
    - SUBLANT - Norfolk, VA
    - SUBPAC - San Diego, CA
    - SURFLANT - Norfolk, VA
    - SURFPAC - San Diego, CA
    - AIRLANT - Norfolk, VA
    - AIRPAC - San Diego, CA

## 7.0 INFORMATION TECHNOLOGY (IT)

The Government will provide all necessary reference documents not generally available to the Contractor as required. Throughout the life of the contract, if any instruction or document is replaced or superseded, the replacement or superseding instruction or document shall be applicable to the requirements defined in this SOW. The Contractor shall not purchase any IT equipment on behalf of NAVAIR in support of this Contract, which reports to PBIS-IT, without a Naval Air Systems Command (NAVAIR) Command Information Officer (CIO) approved NAV-IDAS ITPR.

All IT procured on behalf of this contract shall meet all DoD/DON and NAVAIR IA polices. Failure to follow these policies will result in denied access to NMCI, One Net, Integrated Shipboard Network System (ISNS) and other DON, DoD and Joint Networks. These IA policies are standard across the Department and ensure IA compatibility and interoperability.

IT systems and or networks operated by contractors pursuant to a NAVAIR contract, regardless of the level of data processed, shall be operated in accordance with the NISPOM.

Contractor-owned equipment shall be permitted connections to NAVAIR/DoD networks in order to carry out the performance of this contract. All Contractor-owned hardware and/or software shall meet DoDI 8500.2 Cybersecurity Controls, is subject to validation scanning and must be approved by the NAVAIR site IA Manager prior to connection.

The following specific criteria must be met before the contractor may be connected to any DoD or NAVAIR network in support of this contract. Requirements include:

a. Network Vulnerability Scanning. NAVAIR Deputy CIO for Information Assurance maintains authorized auditing tools and shall provide for firewall/port scans, device discovery scan, vulnerability assessment, and other requirements as required to ensure secure interoperability with DoD Contracts. The contractor shall be responsible for the remediation

of any equipment that fails these audits prior to the connection the system to the networks; Results of approvals shall be documented via Memorandum of Agreement with the Facility Security officer and the Defense Security Service Representative for that contractor;

b. Extent of Validation Scanning. To prevent scanning of corporate assets, all such networks, equipment and connections shall be physically segregated from any government/contractor corporate networks that are not in direct support of DoD contracts;
c. Circuit Provisioning. Any circuit or connection between NAVAIR and/or DoD site and the contractor site shall be provisioned via the Defense Information Security Agency and comply with CJCSI 6211.02C (series), Defense Information System Network (DISN): Policy and Responsibilities, 9 July 2008;
d. Servicing Systems from a Remote Contractor Site. Remote Access Service connections that allow off-station operation and/or administration of contractor owned systems, located at any NAVAIR facility or site, shall not be permitted, with the exception of those systems connecting to the Command via the Outreach Services identified in Section 7, Enterprise Architecture;
e. Memorandum of Agreement and Inter-connection Agreements. An Information Assurance Memorandum of Agreement (MOA) between the contractor owning the equipment and AIR-7.2.6 shall be developed and signed before the equipment can be connected to NAVAIR networks. Failure to comply with the signed MOA shall be grounds for disconnection from the network.

## 7.1 Clinger-Cohen Act

In 1996, Congress enacted the Clinger-Cohen Act (CCA) requiring agencies to use a disciplined capital planning and investment control process to acquire, use, maintain and dispose of information technology. In accordance with the following Department of Defense Directive (DoDD), Department of Defense Instruction (DoDI), Office of the Secretary of Defense (OSD) memo, and Secretary of the Navy Instruction (SECNAVINST), CCA compliance is required for all programs that contain IT, including National Security Systems (NSS). NSS are defined in National Institute of Standards and Technology (NIST) Special Publication (SP) 800-59. Six factors are used to identify NSS, one of which is IT in weapons and weapons system programs. The law provides authority to the agency's Chief Information Officer (CIO) to manage IT resources effectively and ensure cybersecurity and interoperability. The authority to grant compliance with CCA as a statutory milestone program document resides at either first echelon or second echelon. The level of the Acquisition Category (ACAT) or designation as an Abbreviate Acquisition Program (AAP) determines which echelon has this authority. ACAT III and below acquisition programs CCA compliance assertion confirmation approval authority is delegated to the second echelon Command Information Officers. ACAT I and ACAT II acquisition programs CCA compliance assertion confirmation approval resides at DON CIO (First echelon). Approval of interoperability standards compliance for all acquisition programs resides at DON CIO. Approval of the Cybersecurity Strategy (formerly Acquisition Information Assurance Strategy) is a component of CCA compliance however it is approved separately. Approval authority is divided among the DoD, and DON CIOs as well as the second echelon Command Information Officers. See Table 1 for allocation of approval authorities.

| ACAT | Review and Endorsement by Command Information Officer | Approval by Command Information Officer | Review and Endorsement by DASN | Review and Endorsement by DON CIO | Approval by DON CIO | Approval by DoD CIO |
|---|---|---|---|---|---|---|
| IC | X | | X | | X | |
| ID | X | | X | X | | X |
| IAM | X | | X | X | | X |
| IAC | X | | X | X | | X |
| II | X | | X | | X | |
| III | | X | | | | |
| IV | | X | | | | |
| AAP | | X | | | | |

Table 1: Allocation of Cybersecurity Strategy Approval Authorities

Cybersecurity Strategy approval process begins after the Program Manager signs the Cybersecurity Strategy and puts it forward to the Command Information Officer. The final approved Cybersecurity Strategy is an appendix to the Program Protection Plan (PPP) as well as an element of CCA compliance (Interim DoDI 50000.02, Tables 2 and 9).

a. Interim DoD Instruction 5000.02, "Operation of the Defense Acquisition System", November 25, 2013
b. OSD Memo, Clinger-Cohen Act Compliance Policy, Mar 8 2002
c. SECNAVINST 5000.2E, Implementation and Operation of the Defense Acquisition

7.2 System Software/Application Compliance

All Information Technology Systems or software/application development, modification or support shall be performed in accordance with Defense Business Transformation guidance (formerly Business Management Modernization Program (BMMP)), Department of the Navy (DON)/Naval Air Systems Command (NAVAIR) Functional Area Manager (FAM) Policies and Guidance, Network and Server Registration, and Web Enablement mandates.

7.3 Web Sites, Web Enablement and Application / System Development, Modification, and Maintenance Support Services

All Information Technology systems, software, and website development, modification or support shall be performed in accordance with all applicable Federal, DoD, DON, and NAVAIR policy, guidance, standards, and strategies, and should be integrated within the NAVAIR Enterprise portal and collaboration environment whenever possible. Any Web sites/servers hosted/located in contractor facilities, or outside NAVAIR enclave, will transition to NAVAIR architecture and infrastructure in accordance with Legacy Shutdown guidance. Policies include, but are not limited to:

a. Office of Management and Budget Management of Federal Information Resources, OMB CIRCULAR NO. A-130 Revised.
b. OMB Policies for Federal Agency Public Websites, OMB M-05-04 http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2005/m05-04.pdf
c. Section 508 Amendment to the Rehabilitation Act of 1973 http://www.section508.gov/
d. Department of Defense Web Policies and Guidelines http://www.defense.gov/webmasters
e. Navy Information Operations Command (NIOC) Norfolk Web Risk Assessment Team Website http:www.public.navy.mil/fcc-c10f/nionorfolk/Pages/AboutWRA.aspx
f. DON Policy for Content of Publicly Accessible World Wide Web Sites SECNAVINST 5720.47B www.navy.mil/navydata/internet/secnav5720-47b.pdf
g. NAVAIR CIO Website (NAVAIR specific policy and guidelines). To request this policy contact the NAVAIR CIO office – 7.2.2 Applications Integration team – Web Manager: Shane Malamphy at 301- 342-1825
h. Defense Information Systems Agency (DISA) Hosting of All Navy Websites (NAVADMIN 061/08) http://www.public.navy.mil/bupersnpc/reference/messages/Documents/NAVADMINS/NAV2008/NAV08061.txt
i. Consolidation of Navy Web Sites - Reduction of IM/IT Footprint NAVADMIN 145/07 http://www.public.navy.mil/bupersnpc/reference/messages/Documents/NAVADMINS/NAV2007/NAV07145.txt
j. DON Web Presence Policy: The Registration, Compliance of, and Investment in, All Unclassified Web Sites and Uniform Resource Locators http://www.doncio.navy.mil/ContentView.aspx?ID=577
k. Policy and Procedures for Web Risk Assessment (WRA) of Publicly Accessible Navy Sites (ALCOM 129/09) http://www.public.navy.mil/fcc-c10f/niocnorfolk/Documents/NTD-08-09.txt

## 7.4 Software Development / Server Procurement

Any tools developed that will be hosted by the Navy Marine Corps Intranet (NMCI) or run on NMCI workstations will be certified for NMCI and comply with NMCI policy. Additionally, any servers supporting this effort will be transitioned to meet the requirements of the current NAVAIR Server Consolidation effort.

## 7.5 Cyber Security

NAVAIR's Cybersecurity Program is a unified approach to protect unclassified, sensitive or classified information, and is established to consolidate and focus efforts in securing that information, including its associated systems and resources. Cybersecurity is required

operationally throughout the DON. The DON CIO is responsible for IT within the Navy, as mandated by the Clinger-Cohen Act, and is the lead for departmental compliance with the Federal Information Security Management Act of 2002.

All Cybersecurity shall be in compliance with the following listed instructions:

a. ASD (NII) Directive-Type Memorandum (DTM) 08-027 – Security of Unclassified DoD Information on Non-DoD Information Systems, 31 July 2009
b. Chairman of the Joint Chiefs of Staff Instruction CJCSI 3170.01H (series), Joint Capabilities Integration and Development System, 10 January 2012
c. CJCSI 6211.02D Defense Information System Network (DISN): Policy and Responsibilities, 24 Jan 2012
d. CJCSI 6212.01F Net Ready Key Performance Parameter (NR KPP), 21 March 2012
e. CJCSI 6251.01D Narrowband Satellite Communications Requirements, 30 Nov 2012
f. CJCSI 6510.01F, Information Assurance (IA) and Support to Computer Network Defense (CND), 09 Feb 2011, certified current 10 Oct 2013
g. Chairman of the Joint Chiefs of Staff Manual CJCSM 6510.01B – Incident Handling Program 10 July 2012
h. Chief of Naval Operations/Headquarters, United States Marine Corps CNO N614/HQMC C4 – Navy-Marine Corps Unclassified Trusted Network Protection (UTNProtect) Policy, Version 1.0, 31 October 2002
i. Defense Acquisition Guidebook – Chapter 7, Acquiring Information Technology, Including National Security Systems, Section 7.5 Information Assurance (IA)
j. DoD 5220.22-M, National Industrial Security Program Operating Manual, February 28, 2006 (NISPOM)
k. DoD 8570.01-M, Information Assurance Workforce Improvement Program, 19 Dec 2005 (Incorporating Change 3, 24 Jan 2012)
l. DoDD 8000.01 Management of the Department of Defense Information Enterprise, 10 February 2009
m. DoDD 8100.02, Use of Commercial Wireless Devices, Services, and Technologies in the Department of Defense (DoD) Global Information Grid (GIG), 14 April 2004, Certified Current as of 23 April 2007
n. DoDD 8570.01 Information Assurance Training, Certification, and Workforce Management, 15 August 2004, Certified Current as of 23 April 2007
o. DoDI 4630.8, Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS), 30 June 2004
p. DoDI 8500.1, Cybersecurity, 14 March 2014
q. DoDI 8510.01, Risk Management Framework (RMF) for DoD Information Technology (IT), 12 March 2014
r. DoDI 8520.2, Public Key Infrastructure (PKI) and Public Key (PK) Enabling, 01 April 2004
s. DoDI 8551.1, Ports, Protocols, and Services Management (PPSM), 13 August 2004
t. DoDI 8580.1, Information Assurance in the Defense Acquisition System, 9 July 2004
u. DoDI 8581.01, Information Assurance (IA) Policy for Space Systems Used by the Department of Defense, 8 June 2010

v. DON CIO Memo 02-10, Department of the Navy Chief Information Officer Memorandum 02-10 Information Assurance Policy Update for Platform Information Technology, 26 April 2010
w. DON letter 5239 NAVAIR 726/2322 of 18 Feb 09, NAVAIR Data at Rest Policy
x. Federal Information Processing Standards Publications (FIPS PUB) http://www.nist.gov/itl/fips.cfm
y. National Security Telecommunications and Information Systems Security Policy NSTISSP No. 11, Revised Fact Sheet National Information Assurance Acquisition Policy, July 2003.
z. Office of the Chief of Naval Operations OPNAV INST 5239.1C, Navy Information Assurance (IA) Program, 20 Aug 08
aa. SECNAV M-5239.1, Department of the Navy Information Assurance Program; Information Assurance Manual, November 2005
bb. SECNAVINST 5230.15, Information Management/Information Technology Policy for Fielding of Commercial Off the Shelf Software, 10 April 2009
cc. SECNAVINST 5239.3B, Department of the Navy Information Assurance Policy, 17 June 2009
dd. SECNAVINST 5239.19, Department of the Navy Computer Network Incident Response and Reporting Requirements, 18 March 2008
ee. The National Security Act of 1947
ff. Title 40/Clinger-Cohen Act
gg. Title 44/ Federal Information Security Management Act

7.6 Enterprise Architecture

a. Contractor Networks and Connections. Contractor-owned and operated networks are prohibited on any Naval Air Systems Command (NAVAIR) facility or site in support of this contract**.** The contractor may access non-government, external IP space via the NAVAIR-provided Virtual Private Network (VPN) Outreach service or NAVAIR CIO approved Internet Protocol (IP) service.
b. Architecture Compliance. The contractor shall ensure all IT solutions, including database solutions, comply with the appropriate NAE Enterprise Architecture, and are verified by the NAVAIR Enterprise Architect (AIR-7.2.3) prior to build out.
c. Disclosure of pre-existing networks, circuits or connections. Any and all networks, circuits or connections between the contractor and any NAVAIR site related to previous contracts shall be identified in the MOA. Failure to comply and subsequent discovery of an unregistered network, circuit or connection shall be grounds for immediate disconnection.

7.7 Software Process Improvement Initiative (SPII)

As defined in the Assistant Secretary of the Navy (ASN) Memorandum, Software Process Improvement Initiative (SPII) Guidance for Use of Software Process Improvement Contract Language dated 13 July 2007, "Computer Software development" or "software development" means, as applicable developing or delivering new source code, modifying existing source code, coding computer instructions and data definitions, building databases schema, and performing other activities needed to implement the design of a noncommercial computer software product. This definition recognized that even small changes to software code can result in significant

changes to software system behavior and quality, and, consequently, that it is necessary for developers to define and follow disciplined and appropriate processes.

Mandatory elements of the SPII policy language are:

a. The requirement that Offerors submit a proposed Software Development Plan (SDP) with their proposals, and, during contract performance, deliver a completed SDP (based on the proposed SDP) as a Contract Data Requirements List (CDRL) deliverable, subject to Government review and approval. (CDRL A041)
b. The information content of the SDPs, which shall follow the framework of Institute of Electrical & Electronics Engineers (IEEE)/Electronics Industries Association (EIA) IEEE/EIA Std 12207 regarding subject content, level of detail, and completeness.
c. The requirement that the SDP serve during contract performance as the benchmark for the contractor's software development effort.
d. The requirement that the SDP shall be periodically evaluated and updated, as a part of continuous process improvement subject to Government review and approval.

Discretionary elements of the SPII policy language are:

a. Where the language is incorporated in the solicitation and contract.
b. The format of the SDP (including whether it needs to be a single volume or may consist of multiple volumes.)
c. The other elements of IEE/EIA Std 12207 that must be included, as based on the needs of the system to be acquired and its associated work content.

The policy and additional information can be found at
http://acquisition.navy.mil/content/view/full/5144

7.8 Contractor personnel assigned to perform work under this contract may require access to Government IT Systems. Contractor personnel requiring access to Government IT Systems shall comply with AIR-7.2/7.4 Policy Memo 5510, "Information Technology (IT) Position Requirements" dtd 16 Oct 2008 or latest version thereof, available as attached or through the Procuring Contracting Officer (PCO). Prior to accessing any Government IT System, contractor personnel shall submit a completed Systems Authorization Access Request Navy (SAAR-N) OPNAV 5239/14 (JUL 2008), Annual Information Assurance (IA) training certificate, and initiate the requisite background investigation (or provide proof of a current background investigation) to the Contracting Officer's Representative (COR). For purposes of this clause, reference to the COR shall mean the PCO for contracts that do not have a designated COR. In order to maintain access to required systems, the contractor shall ensure completion of annual IA training, monitor expiration of requisite background investigations, and initiate re-investigations as required. (CDRL A021, A022)

7.8.1 Contractor personnel shall complete, sign and date Part I of the SAAR-N form and coordinate with the COR to designate in Part III, block 33c, the appropriate IT level designation (IT-1, IT-2, or IT-3). The completed SAAR-N and proof of a current background investigation is to be provided to the COR. The COR will review the SAAR-N submitted by the contractor, and if the COR concurs that the contractor requires the IT access designated, the COR will

complete and sign Part II. When a background investigation is required, contractor personnel shall coordinate with Command Personnel Security, AIR-7.4. (CDRL A021, A022)

7.8.2 The contractor shall provide separate Information Technology Personnel Security Reports to the COR and to NAVAIR Security. The report submitted to the COR shall not contain Social Security information that is required in the report submitted to NAVAIR Security. Both reports shall show that all contractor personnel meet the requirements for obtaining access to Government IT Systems, and that all requirements are verified and validated thereafter on an annual basis. All prime, subcontractor, consultants, and temporary employees shall be included in the reports. Revised reports shall be submitted when gains and/or losses of employees occur to ensure that all employees comply with these requirements prior to accessing Government IT Systems. (CDRL A021, A022)

7.9 As this effort requires extensive database and record keeping analysis, the contractor is expected to provide all the necessary servers and/or computers necessary to execute the SOW requirements. Contractor shall detail the contractor owned equipment that may require access to NAVAIR/DoD networks.

## 8.0 TECHNICAL DIRECTION LETTERS (TDLs)

When necessary, technical direction or clarification concerning the details of specific tasks set forth in the contract task order shall be given through issuance of Technical Direction Letters (TDLs) by the Contracting Officer's Representative (COR). TDLs will not, in any manner, alter the scope of the contract or any task order. Each TDL issued will include a description of the work to be performed, a list of deliverables, data item descriptions, and a delivery schedule. For further direction see Clause 5252.242-9502 "TECHNICAL DIRECTION" in Section H.

## 9.0 PROGRESS REPORTS

### 9.1 Financial Progress Reports

In order to provide NAWCAD with the current financial status of the contract at the CLIN level, the contractor shall prepare and deliver financial progress reports for each task order and a roll up at the contract level. (CDRL A024)

### 9.2 Technical Progress Reports

The contractor shall prepare and deliver a technical progress report as a supplement to each voucher presented for payment. (CDRL A024)

### 9.3 Enterprise-Wide Contractor Manpower Reporting Application (ECMRA)

The contractor shall report contractor labor hours (including subcontractor labor hours) required for performance of services provided under this contract for Naval Air Warfare Center - Aircraft Division (NAWCAD) via a secure data collection site (CDRL A019). Contracted services excluded from reporting are based on Product Service Codes (PSCs). The excluded PSCs are:

1) W, Lease/Rental of Equipment
2) X, Lease/Rental of Facilities
3) Y, Construction of Structures and Facilities
4) S, Utilities ONLY
5) V, Freight and Shipping ONLY

The contractor is required to completely fill in all required data fields using the following web address https://doncmra.nmci.navy.mil.

Reporting inputs will be for the labor executed during the period of performance during each Government fiscal year (FY), which runs October 1 through September 30. While inputs may be reported any time during the FY, all data shall be reported no later than October 31 of each calendar year. Contractors may direct questions to the help desk, linked at https://doncmra.nmci.navy.mil.

9.4 Segregation of Costs and Invoice Requirements

To support invoice reviews, the Contractor shall report costs in accordance with CDRL A023.

9.5 Project/Task Closeout Report

The contractor shall provide a closeout report after completing the requirements of each task order. (CDRL A015)

10.0 WORK SCHEDULE

The contractor shall provide the required services and staffing coverage during normal working hours (NWHs). NWHs are usually eight and one-half (8.5) hours (including a 30-minute lunch break), from 0730-1600 each Monday through Friday (except on the legal holidays specified elsewhere). Some supported Government offices have the flexibility to start as early as 0600 and end as late as 1800, Monday through Friday. Services and staffing shall be provided for each office at least eight (8) hours per day (an 8.5-hour workday with a 30-minute lunch break).

Government employees are allowed to voluntarily work a compressed work schedule (CWS). CWS is an alternative work schedule to the traditional five 8-hour workdays per week. An employee participating in the CWS completes eight weekdays at nine (9) hours each; one Friday is alternately worked for eight (8) hours, and the other Friday is not worked. The result is eighty (80) hours worked every two weeks, forty-four (44) work hours one week and thirty-six (36) work hours the other.

The contractor, with written agreement by the COR, may allow its employees to work a CWS. Any contractor that chooses to allow its employees to work a CWS in support of the contract agrees that any additional costs associated with the implementation of the CWS vice the standard schedule are unallowable costs under the contract and will not be reimbursed by the Government. Furthermore, all contractors shall comply with the requirements of the Fair Labor

Standards Act and particularly with Section 7 regarding compensatory overtime. Additionally, the CWS shall not prevent contractor employees from providing necessary staffing and services coverage when required by the Government facility.

## 11.0 TRAVEL

The contractor shall be required to travel at the Government's request.

### 11.1 Travel Locations and COR Approval

Local and long distance, domestic, and international travel (CONUS and OCONUS) may be required for this effort. All travel expenses shall be authorized by the COR, and only those travel expenses having valid receipts and travel claims shall be reimbursed to the contractor as Other Direct Costs. Travel shall be reimbursed at cost in accordance with the applicable Federal Travel Regulations (FTR) and NAVAIR clause 5252.232-9509 "Reimbursement of Travel, Per Diem, and Special Material Costs".

11.1.1 CONUS locations may include but are not limited to:

| | |
|---|---|
| Mobile, AL | Indian Head, MD |
| Long Beach, CA | Lexington Park, MD |
| Port Hueneme, CA | Bath, ME |
| San Diego, CA | Gulfport, MS |
| Groton, CT | Pascagoula, MS |
| Stratford, CT | Butte, MT |
| Washington, DC | Philadelphia, PA |
| Jacksonville, FL | Norfolk, VA |
| Mayport, FL | Bremerton, WA |
| Orlando, FL | Everett, WA |
| Pensacola, FL | Marinette, WI |
| Carderock, MD | |

11. 1.2 OCONUS locations may include but are not limited to:

| | |
|---|---|
| Manama, Bahrain | Sigonella, Italy |
| Santa Rita, Guam | Sasebo, Japan |
| Pearl Harbor, HI | Yokosuka, Japan |
| Sicily, Italy | Rota, Spain |

11. 1.3 OCONUS travel shall be conducted IAW DFAR clause 252.225-7040, and the requirements set forth in the task order.

### 11. 2 Synchronized Pre-Deployment & Operational Tracker (SPOT)

The contractor may travel in USCENTCOM locations. SPOT enables the validation of contractor personnel associated with specific contracts and subcontracts, their authorization and

eligibility for access to specific DoD facilities, and their eligibility for specific Government-Furnished Support (GFS), including transportation, housing, food, medical care, medical evacuation, and emergency evacuation coverage. The contractor shall initiate a Letter of Authorization (LOA) for each prospective traveler. The contractor shall use the SPOT link, https://spot.altess.army.mil to enter and maintain data with respect to traveling/deployment personnel and to generate LOAs.

11. 3 Letter of Authorization (LOA)

The Government will provide an LOA for official travel supporting this contract. LOAs will identify local authorizations, privileges, etc., as specified by DoD requirements. All defense contractors working under this contract shall carry an LOA with them at all times while deployed.

11. 4 Local Travel Reimbursement

Reimbursement of travel by the contractor or subcontractor located within 50 miles of the work site shall not be authorized.

11. 5 Travel Reporting and Monitoring

All travel costs will be reported in the monthly status report as well as monitored by the contractor to ensure contract and task order ceilings are not exceeded. (CDRL A012)

## 12.0 DATA ITEMS FORMAT

The contractor shall provide a uniform order of the following information clearly placed on all required contract data item (deliverables): contract number, task order number, contractor's name, contract WBSN, CDRL number and title, period covered, and date of submission. All data items required by the CDRLs (DD Form 1423, Exhibit A) shall be distributed as required by the CDRL.

12.1 Electronic Format Preferred

The contractor shall provide deliverables in electronic format whenever possible. Deliverables shall be electronically mailed to the COR where feasible. Specific email addresses for electronic submission of deliverables will be provided on the applicable CDRL. Final software products shall be delivered on CD-ROM or DVD media and delivered by hand or postal service.

## 13.0 IDENTIFICATION BADGES

13.1 Identification Badges

The contractor shall furnish all requested information required to facilitate issuance of identification badges, as required, and shall conform to all applicable regulations concerning their use and possession. ID media is U.S. Government property and shall be surrendered to the

Pass and ID Office upon expiration or termination of employment. The Government will not check out contractor personnel unless all media, including Common Access Cards (CACs), are returned in accordance with NASPAXRIV Instruction 5510.15, Regulations Governing Admission to Naval Air Station, Patuxent River, Webster Field, and Navy Recreation Center Solomons.

13.2 Identification of Contractor Personnel

Corporation affiliation shall be referenced on all written documentation that refers to contractor personnel. This is required for internal and external communications. Similarly, the contractor affiliation shall be identified when answering phone calls and at the beginning of any meeting or conference where contractor personnel are in attendance.

## 14.0 NON- DISCLOSURE AGREEMENTS

14.1 Non-Disclosure Agreement

In the performance of the contract, the contractor may have access to non-public proprietary information. The contractor shall require that any employee performing services under the contract execute a non-disclosure agreement satisfactory to the Contracting Officer and the entity for which the information belongs. The non-disclosure agreement shall acknowledge the contractor and employee's duties with respect to non-public information and promise to comply with those obligations. Copies of the executed nondisclosure agreements shall be provided to the COR.

14.2 Non-Government Purposes

Consistent with the terms and conditions of paragraph (e)(5) of NAVAIR 5252.209-9510, "Organizational Conflicts Of Interest (Services)", with respect to proprietary data of third parties, and DFARS 252.227-7025, "Limitations On The Use Or Disclosure Of Government- Furnished Information Marked With Restrictive Legends", with respect to technical data, the contractor shall not use, modify, reproduce, release, perform, display, or disclose any non-public information provided to or obtained by the contractor in the course of performing the contract for other than Government purposes, and shall not do so for any commercial or personal purpose.

14.3 Conflicts of Interest

In the event the contractor knows of, or identifies, an employee who has a commercial interest in the subject matter of any proposed or on-going agreement related to the services to be performed herein, the contractor shall consider such interest a potential conflict of interest under paragraph (g) of NAVAIR 5252.209-9510, and promptly disclose it to the Contracting Officer.

## 15.0 OPERATIONS SECURITY (OPSEC)

15.1 Operations Security (OPSEC) Plan

The contractor shall implement and maintain security procedures and controls to prevent unauthorized disclosure of controlled unclassified and classified information and to control distribution of controlled unclassified and classified information in accordance with the National Industrial Security Program Operating Manual (NISPOM) and DoDM 5200.01, Information Security Manual. The DoD Contract Security Classification Specification, DD Form 254, specified in Section J, defines program specific security requirements. All controlled unclassified information shall be appropriately identified and marked as For Official Use Only in accordance with DoDM 5200.01, Information Security Program: Controlled Unclassified Information (CUI) Volume 4 (enclosure 3) and DoD 5400.7-R (Freedom of Information Act Regulation) (Chapter 3). All contractor facilities shall provide an appropriate means of storage for controlled unclassified and classified documents, equipment, and materials in accordance with Operations Security (OPSEC) requirements. For Official Use Only information generated and/or provided under this contract shall be marked and safeguarded as specified in DoDM 5200.01 (DoD Information Security Program: Controlled Unclassified Information (CUI)) Vol. 4 (enclosure 3 pages 11-17) available at http://www.dtic.mil/whs/directives/corres/pdf/520001_vol4.pdf and DoD 5400.7-R, Freedom of Information Program Chapter 3 (pages 31-42) available at http://www.dtic.mil/whs/directives/corres/pdf/540007r.pdf. All controlled unclassified technical information shall be appropriately identified and marked with the distribution statement identified on the source document or directed by the COR.

The contractor shall prepare and deliver an Operations Security Plan for Government review. (CDRL A020)

15.2 OPSEC Program

The contractor shall develop, implement, and maintain an OPSEC program to protect controlled unclassified and classified activities, information, equipment, and material used or developed by the contractor and any subcontractor during performance of the contract. The contractor shall be responsible for the subcontractor implementation of the OPSEC requirements. This program may include Information Assurance and Communications Security (COMSEC). The OPSEC program shall be in accordance with National Security Decision Directive (NSDD) 298, and at a minimum shall include:

(a) Assignment of responsibility for OPSEC direction and implementation.
(b) Issuance of procedures and planning guidance for the use of OPSEC techniques to identify vulnerabilities and apply applicable countermeasures.
(c) Establishment of OPSEC education and awareness training.
(d) Provisions for management, annual review, and evaluation of OPSEC programs.
(e) Flow down of OPSEC requirements to subcontractors when applicable.

16.0 OTHER DIRECT COSTS (CLINs 0011, 0012, 0013, 0014, 0015)

16.1 Other Direct Costs

Other Direct Costs the contractor may be required to incur travel and incidental supplies and materials costs in support of this effort as Other Direct Costs (ODC).

16.2 Government Property

All materiel associated with this contract that is purchased by the contractor and not depleted during the performance of the contract shall become the property of the Federal Government. Any materiel remaining after the completion of the contract, the cost of which has been reimbursed by the Government, will remain Government property and will be transferred to the Government by way of a DD1149 or Material Inspection and Receiving Report (DD 250).

## 17.0 PERSONNEL SECURITY

Only U.S. citizens may perform under this order. All personnel must be able to obtain the Secret clearance levels cited in Section 20 of this SOW. All personnel required to work at the Government's site must, at a minimum, obtain an Interim Secret Clearance prior to starting work at the Government's facility. In some instances, a Top Secret level clearance may be required. The level of clearance required performing tasking under this contract and resultant order is up to and including Top Secret.

## 18.0 QUALITY SURVEILLANCE AND PERFORMANCE STANDARDS

The Government will conduct quality surveillance via various methods including formal and informal meetings, review of technical reports, review of monthly progress reports, and review of deliverables as provided in the Quality Assurance Surveillance Plan (QASP)/Contract Surveillance Plan (CSP), found in Section J. The Government will evaluate contractor performance in the areas of Quality, Schedule, Cost Control, Business Relations, Management, Small Business compliance, and other areas in accordance with the procedures and criteria established in the QASP/CSP specified in Section J.

## 19.0 GOVERNMENT FURNISHED PROPERTY/INFORMATION

GFI such as training, and documentation requiring contractor review, analysis, and updating will be provided throughout the task order periods of performance. Disposition of GFI will be made at task order completion or upon the requirement completion.

## 20.0 PERSONNEL REQUIREMENTS

20.1 The contractor is responsible for employing and maintaining personnel throughout the entire contract that meet the minimum qualifications for the applicable labor categories listed below. Key personnel are outlined in the labor category qualifications below. The number of key resumes required per labor category is shown in brackets.

20.2 Personnel must have, or be able to, obtain the appropriate security clearance as outlined in the table below and on the DD Form 254. Proof of U.S. citizenship is required to permit access to government installation, aircraft, and ships.

Note: All required experience for any of the labor categories may have been obtained concurrently. All degrees shall be obtained from an accredited college or university.

## SECURITY CLEARANCE INFORMATION

| Position/labor category | Security Clearance Level Required at Issuance of Contract/Task Order | Required 60 Days After Issuance of Contract/Task Order | Required 120 Days After Issuance of Contract/Task Order |
|---|---|---|---|
| Analyst | Secret (1) | Secret (1) | |
| Analyst, Junior | Secret (1) | | |
| Analyst, Senior | Secret (1) | | |
| Computer Based Training Specialist | | | Secret (1) |
| Computer Programmer I | | | Secret (1) |
| Computer Programmer II | | | Secret (1) |
| Computer Programmer III | | Secret (1) | |
| Computer Programmer IV | | Secret (1) | |
| Computer Scientist | | | Secret (1) |
| Computer Scientist, Senior | | | Secret (1) |
| Computer Systems Analyst I | | | Secret (1) |
| Computer Systems Analyst II | | | Secret (2) |
| Computer Systems Analyst III | | | Secret (1) |
| Information Assurance Analyst | | | Secret (1) |
| Information Assurance Analyst, Senior | Secret (1) | | |
| Information Management and Technology Analyst, Senior | Secret (1) | | |
| Logistician II | Secret (1) | | |
| Logistician III | Secret (1) | | |
| Manager | Secret (1) | | |
| Program Manager, Senior | Secret (1) | | |
| Project Analyst | Secret (1) | | |
| Software Engineer, Journey Level | Secret (1) | | |
| Software Engineer, Senior | | | Secret (1) |
| Subject Matter Expert (Navy Maintenance Lead) | | Secret (1) | |

| | | | |
|---|---|---|---|
| Subject Matter Expert (S1000D IETM Lead) | | | Secret (1) |
| Systems Analyst, Journey Level | Secret (1) | | |
| Systems Analyst, Junior | Secret (1) | | |
| Systems Analyst, Senior | Secret (1) | | |
| Systems Engineer, Journey Level | Secret (1) | | |
| Systems Engineer, Junior | Secret (1) | | |
| Systems Engineer, Senior | Secret (1) | | |
| Technical Writer II | Secret (1) | | |
| Training Specialist II | Secret (1) | | |
| Training Specialist III | Secret (1) | Secret (1) | |

As this solicitation requirement will necessitate a phase-in staging plan, the number of days to obtain a clearance, by category, will be dictated by authorized task orders.

**DEFINITIONS**

As used in the minimum personnel qualification descriptions for this contract, the terms indicated are defined or their meaning qualified as follows:

**Academic Year** - A full or complete year of study at an accredited junior college, college, university, or other academic institution toward which at least 30 semester hours or 45 quarter hours of undergraduate study, or 18 semester hours or 27 quarter hours of postgraduate study, were completed

**Accredited Institution** - A post-secondary educational institution (junior college, college, university, technical trade, or professional school) that has been approved by an accrediting agency listed as nationally recognized by the U.S. Department of Education (DoE)

**Accredited Program** - An educational program or course of study offered by a post-secondary educational institution and approved by an accrediting agency listed as nationally recognized by the U.S. DoE

**Degree** - An academic title conferred by an educational institution upon completion of a unified course of study; if not otherwise noted, the term shall mean a degree at the bachelor, master, or doctoral levels only

**Engineering or Engineering Discipline** - When used in relation to educational or work experience requirements, "engineering" means any of the following specific subjects, disciplines, or areas of work experience only: aerospace, civil, computer, electrical, electronics, industrial, mechanical, nuclear, or systems.

**Experience and Years of Experience**.

a) When used in relation to requirements for past participation in professional work or employment activities, "experience" means full-time participation (on the basis of a standard 40 hour work week), with at least one-half of which time was spent performing qualifying functions as a practitioner or employee.

b) When used in relation to requirements for a particular term or period of participation, "years of experience" should mean full, productive years of participation. Productive years are considered work years of 52 weeks reduced by reasonable amounts of time for holiday, annual, and sick leave. If participation was part-time, or if less than one-half of the standard workweek was spent performing qualifying functions, the actual time spent performing qualifying functions may be cumulated to arrive at full years (or years and months) of experience. For example, only the actual number of full days (or full-day equivalents) of duty or drills completed during a year of military reserve participation, or in other qualifying part-time employment or practice, may be cumulated toward years of experience. Qualifying part-time experience performed in addition to other full-time qualifying employment during the same period of time may be cumulated on a full time equivalent basis and added to the full time experience to satisfy a total experience requirement.

**Postgraduate Degree** - A master's, Ph.D., or other professional degree for which completion of an undergraduate curriculum for receipt of a bachelor's degree was a prerequisite.

**Related Field** - A field with a similar curriculum of study but is referenced by a different name.

**Technical Discipline** - When used in relation to educational or work experience requirements, "technical discipline" shall mean a degree in the field of Mathematics or Sciences.

**Technical Rating** - Completion of a U.S. Navy electronics technology related A, B or C school for Cryptologic Technician Technical (CTT), Electronics Technician (ET), Electronic Warfare Technician (EW), Fire Controlman (FC), or Information Systems Technician or the equivalent from another branch of service.

**QUALIFICATIONS**

**KEY PERSONNEL:**

**Analyst, Senior (Key)(1)**

Function: Leads the application of analytic techniques to support strategic decision making for programs/projects. Resolves complex problems. Performs management, technical, or business case analyses. Participates as a member of and/or supports the specified program or project team. Applies government-instituted processes for documentation, change control management and data management. Directs the activities of Junior Analysts or other staff as necessary on activities related to the application of analytical techniques and methodologies.

Education: BS or BA degree.

Experience: At least six (6) years of experience as an analyst in support of a complex project/program to include defining requirements.

OR

Education: AS or AA degree.

Experience: At least ten (10) years of experience as an analyst in support of a complex project/program to include defining requirements.

OR

Education: High School diploma or GED

Experience: At least fourteen (14) years of experience as an analyst in support of a complex project/program to include defining requirements.

**Information Management and Technology Analyst, Senior (Key)(1)**

Function: Leads the execution of complex tasks. Integrates, plans, coordinates, and facilitates information system related activities such as upgrade of hardware and software, program and system design development of computer networks, and implementation of internet and intranet sites. Assists in the upkeep, maintenance and security of networks. Analyzes the computer and information needs of the organization from an operational and strategic perspective and determines immediate and long-range personnel and equipment requirements. Ensures the availability, continuity, and security of exhibit A
and information technology. Recommends and supports process improvement initiatives.

Education: MS or MA degree in computer science, computer engineering, or information technology field. An active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification is required for at least one (1) Information Management and Technology Analyst, Senior.

Experience: At least ten (10) years of experience with information systems. At least six (6) of the ten (10) years of experience with ALE, IETM, or Navy Maintenance systems. At least four (4) of the ten (10) years of experience integrating data from systems with at least five (5) distributed sources, a combination of directly controlled and shared/outside databases, and mix connectivity for data synchronization.

OR

Education: BS or BA degree in computer science, computer engineering, or information technology field.

Experience: At least fourteen (14) years of experience with information systems. At least eight (8) of the fourteen (14) years of experience with ALE, IETM, or Navy Maintenance systems. At

least five (5) of the fourteen (14) years of experience integrating data from systems with at least five (5) distributed sources, a combination of directly controlled and shared/outside databases, and mix connectivity for data synchronization.

**Manager (Key)(1)**

Function: Acts as the overall lead, manager and administrator for the contracted effort in support of a Navy program or project. Serves as the primary interface and point of contact with Government program authorities and representatives on technical and program/project issues. Oversees contractor personnel program/project operations by developing procedures, planning and directing execution of the technical, programming, maintenance and administrative support effort and monitoring and reporting progress. Manages acquisition and employment of program/project resources and controls financial and administrative aspects of the program/project with respect to contract requirements.

Education: BS or BA degree

Experience: At least six (6) years of professional experience in the Defense acquisition, and three (3) years of experience in support of Navy Acquisition management. Knowledgeable of acquisition policies and procedures. Demonstrated knowledge of and experience with the requirements of the DOD 5000 series. Demonstrated ability to work with large and diverse teams and the ability to effectively provide guidance, direction, and supervision in all areas of contracted effort such as program management, systems engineering, major system acquisitions, and financial management. At least four (4) of the six (6) years of experience must be leading teams supporting Navy IETM, Planned Maintenance, or Automated Logistics systems development and sustainment teams.

OR

Education: AS or AA degree.

Experience: At least ten (10) years of professional experience in the Defense acquisition, and three (3) years of experience in support of Navy Acquisition management. Knowledgeable of acquisition policies and procedures. Demonstrated knowledge of and experience with the requirements of the DOD 5000 series. Demonstrated ability to work with large and diverse teams and the ability to effectively provide guidance, direction, and supervision in all areas of contracted effort such as program management, systems engineering, major system acquisitions, and financial management. At least four (4) of the ten (10) years of experience must be leading teams supporting Navy IETM, Planned Maintenance, or Automated Logistics systems development and sustainment teams.

OR

Education: High School diploma or GED.

Experience: At least fourteen (14) years of professional experience in the Defense acquisition, and three (3) years of experience in support of Navy Acquisition management. Knowledgeable of acquisition policies and procedures. Demonstrated knowledge of and experience with the requirements of the DOD 5000 series. Demonstrated ability to work with large and diverse teams and the ability to effectively provide guidance, direction, and supervision in all areas of contracted effort such as program management, systems engineering, major system acquisitions, and financial management. At least four (4) of the fourteen (14) years of experience must be leading teams supporting Navy IETM, Planned Maintenance, or Automated Logistics systems development and sustainment teams.

**Program Manager, Senior (Key)(1)**

Function: Acts as the overall lead, manager and administrator for the contracted effort in support of aircraft or ship subsystems, ACAT I-IV programs or AAPs. Serves as the primary interface and point of contact with Government program authorities and representatives on technical and program/project issues. Briefs senior leadership on program status and milestones. Oversees contractor personnel program/project operations by developing procedures, planning and directing execution of the technical, programming, maintenance and administrative support effort and monitoring and reporting progress. Manages acquisition and employment of program/project resources and controls financial and administrative aspects of the program/project with respect to contract requirements.

Education: MS or MA degree in engineering, engineering management, computer science, management, program management, or business administration.

Experience:

(a) At least twelve (12) years of professional experience in Defense acquisition, three (3) years of which must have been in the previous six (6) years, in support of Navy Acquisition management; and a minimum of three (3) years supervisory experience. At least eight (8) of the twelve (12) years of experience in the planning, organizing, directing, and controlling multiple Interactive Electronic Technical Manual (IETM), Planned Maintenance System (PMS), or computer-based training development projects.

(b) Demonstrated ability to work with large and diverse teams and the ability to effectively provide guidance, direction, and supervision in all areas of contracted effort such as program management, systems engineering, and financial management.

OR

Education: BS or BA degree in engineering, engineering management, computer science, program management, or business administration.

Experience:

(a) At least sixteen (16) years of professional experience in Defense acquisition, three (3) years of which must have been in the previous six (6) years, in support of Navy Acquisition management; and a minimum of three (3) years supervisory experience. At least eight (8) of the twelve (12) years of experience in the planning, organizing, directing, and

controlling multiple Interactive Electronic Technical Manual (IETM), Planned Maintenance System (PMS), or computer-based training development projects.

(b) Demonstrated ability to work with large and diverse teams and the ability to effectively provide guidance, direction, and supervision in all areas of contracted effort such as program management, systems engineering, and financial management.

**Software Engineer, Senior (Key)(1)**

Function: Responsible for the detailed design, implementation, and testing of subsystems and system components. A Senior SE is able to build a wide variety of software subsystems and components efficiently and effectively, given only a requirements specification and constraints. A Senior SE is able to develop and sustain these subsystems and software components in complex, multi-vendor, multi-platform environments.

Education: MS or MA in Engineering, Logistics, Computer Science, Information Systems, or Science. Must have an active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification.

Experience: At least fifteen (15) years of experience developing and sustaining subsystem and software components. At least six (6) of the fifteen (15) years of experience working with Standard Generalized Markup Language (SGML), Extensible Markup Language (XML), or development of database queries or transformation of unstructured data into standards based structured data formats. At least three (3) of the fifteen (15) years of experience developing solutions distributed to USN ashore and afloat users through DoD infrastructure.

OR

Education: BS or BA in Engineering, Logistics, Computer Science, Information Systems, or Science.

Experience: At least nineteen (19) years of experience developing and sustaining subsystem and software components. At least six (6) of the nineteen (19) years of experience working with Standard Generalized Markup Language (SGML), Extensible Markup Language (XML), or development of database queries or transformation of unstructured data into standards based structured data formats. At least three (3) of the fifteen (15) years of experience developing solutions distributed to USN ashore and afloat users through DoD infrastructure.

**Subject Matter Expert (Navy Maintenance Lead) (Key)(1)**

Function: Applies expertise to support program development, project execution, business and technical operations, strategic initiatives, workforce development, or as required to support technical and organizational tasks for PMS integration within USN operational, support, and engineering/sustainment environments. Assists and leads both analysis of current or in-work systems and the planning of future systems.

Education: High school diploma or GED. Must have an active NAVSEA Reliability Centered Maintenance (RCM) – Level 2 Certification.

Experience: At least ten (10) years of hands-on experience in one of the following areas: Business operations, systems requirements, operational requirements, test & evaluation, and training. Recognized expert who has demonstrated industry and public service leadership in Navy Maintenance. At least five (5) of the ten (10) years demonstrated experience with Navy's Maintenance and Material Management system and Planned Maintenance System (PMS). Working knowledge including interpretation and demonstrated use of NAVSEA 4790 3M Manual.

**Subject Matter Expert (S1000D IETM Lead) (Key)(1)**

Function: Applies expertise to support program development, project execution, business and technical operations, strategic initiatives, workforce development, or as required to support technical and organizational tasks for S1000D, IETM, and ALE.

Education: High school diploma or GED.

Experience: At least ten (10) years of hands-on experience in one of the following areas: Business operations, systems requirements, operational requirements, test & evaluation, and training. Recognized expert who has demonstrated industry and public service leadership in S1000D and IETM technology. At least (5) of the ten (10) years to include demonstrated experience working with USN S1000D and ALE, drafting and reviewing DoD 5000 acquisition materials, evaluating IETM content, and assisting government verification efforts for IETM usability.

**Systems Analyst, Senior (Key)(1)**

Function: Leads the execution of complex tasks. Applies logical analyses or test and evaluation on all programs within the contractual scope. Performs comprehensive analyses of hardware/software concepts, designs and test requirements. Reviews, analyzes, integrates and conducts test and evaluation of contractor or Government -generated source data and develops interim documentation. Performs system concept formulation, system design analysis and subsystems design analysis. Works on special problem areas to make recommendations; administers complex areas of the network, data modeling/database integration, security analysis, and planning.

Education: MS or MA in in computer science, computer engineering, information systems, physical science, or business field. At least one (1) Systems Analyst Senior must have an active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification.

Experience: At least ten (10) years of experience in a technical analysis position with mid-sized client-server systems in systems analysis, software design, software development and database administration. Demonstrated knowledge of quality assurance, quality control, and independent verification and validation techniques. Works independently and as part of a team in researching

data, developing analytical techniques and methodologies. Demonstrated knowledge of system acquisition practices required to design, develop, integrate, test and manufacture a major system. At least six (6) of the ten (10) years of experience translating functional objectives into systems designs, consolidating complex data from separate sources into analytic tools, optimizing tools and processes, leading the instructional design of Navy Computer Based Training (CBT) software or leading the requirements/architectural analysis of systems supporting NAVSEA planned maintenance.

OR

Education: BS or BA in in computer science, computer engineering, information systems, physical science, engineering, or business field.

Experience: At least fourteen (14) years of experience in a technical analysis position with mid-sized client-server systems in systems analysis, software design, software development and database administration. Demonstrated knowledge of quality assurance, quality control, and independent verification and validation techniques. Works independently and as part of a team in researching data, developing analytical techniques and methodologies. Demonstrated knowledge of system acquisition practices required to design, develop, integrate, test and manufacture a major system. At least six (6) of the fourteen (14) years of experience translating functional objectives into systems designs, consolidating complex data from separate sources into analytic tools, optimizing tools and processes, leading the instructional design of Navy Computer Based Training (CBT) software or leading the requirements/architectural analysis of systems supporting NAVSEA planned maintenance.

**Systems Engineer, Senior (Key)(1)**

Function: Has programmatic or technical leadership roles in an organization identifying, formulating, designing and/or testing practical solutions to engineering problems and guide the engineering development of modern complex systems; and to employ systems engineering methods and tools in the development of advanced complex systems, and when appropriate, conduct research in applied systems engineering to advance the field.

Education: MS or MA in systems engineering, computer science, computer engineering, information systems, logistics, or an engineering discipline. At least two (2) Systems Engineer, Senior Level must have an active NAVSEA Reliability Centered Maintenance (RCM) Level 2 certification.

Experience: At least ten (10) years of experience in an engineering position, three (3) of which must be directly related to Naval systems. Demonstrated knowledge in area of engineering expertise. At least four (4) of the ten (10) years experience analyzing Naval ship systems integration, automated logistics, or air/ship integration. At least one Systems Engineer, Senior must demonstrate four (4) or more years' experience optimizing NAVSEA Maintenance Requirement Cards (MRCs) across configuration sets.

OR

Education: BS or BA in systems engineering, computer science, computer engineering, information systems, logistics, or an engineering discipline. At least two (2) Systems Engineer, Senior Level must have an active NAVSEA Reliability Centered Maintenance (RCM) Level 2 certification.

Experience: At least fourteen (14) years of experience in an engineering position, six (6) of which must be directly related to Naval systems. Demonstrated knowledge in area of engineering expertise. At least four (4) of the fourteen (14) years of experience analyzing Naval ship systems integration, automated logistics, or air/ship integration. At least one Systems Engineer, Senior must demonstrate four (4) or more years' experience optimizing NAVSEA Maintenance Requirement Cards (MRCs) across configuration sets.

**Training Specialist III (Key)(1)**

Function: Researches and analyzes new or revised technical documentation and information concerning advances in military weapons systems and support systems technology. Designs, develops, and prepares structured training manuals, presentation materials, and courses of study related to the operation or maintenance of military weapon systems and support systems. Works to implement program use of the training courses and materials that are developed.

Education: BS or BA degree in Education, English, Psychology, Organizational Learning, or Human Factors. Holds current training certification.

Experience: At least ten (10) years of experience establishing training requirements, developing goals and objectives, developing training programs, and applying the instructional system development (ISD) process. At least three (3) of the ten (10) years specifically applying the ISD process to the development of self-paced CBTs.

**NON-KEY PERSONNEL**

**Analyst**

Function: Applies analytic techniques in the evaluation of program/project objectives. Analyzes requirements, status, budget and schedules. Performs management, technical, or business case analyses. Participates as a member of and/or supports the specified program or project team. Collects, completes, organizes and interprets data relating to aircraft acquisition and product programs. Tracks program/project status and schedules. Applies government-instituted processes for documentation, change control management and data management.

Applies analytic methodologies and principles to address client requirements. Contributes to the implementation of strategic direction. Performs analyst functions including data collection, interviewing, data modeling, project testing, and creation of performance measurements to support project objectives. Conducts activities in support of project team's objectives.

Education: AS or AA degree

Experience: At least four (4) years of experience in management, technical or business analysis disciplines. Demonstrated experience in analyzing program/project status and providing documentation to support project/program.

OR

Education: High School diploma or GED.

Experience: At least six (6) years of experience in management, technical or business analysis disciplines. Demonstrated experience in analyzing program/project status and providing documentation to support project/program.

**Analyst, Junior**

Function: Provides program/project office analysis support. Participates in meetings and supports specified program and project teams. Tracks program/project status and schedules, takes minutes, prepares presentations, reports, studies, documentation. Performs tasks under supervision.

Education: High School diploma or GED

Experience: At least two (2) years of experience in management, technical or business analysis disciplines.

**Computer Based Training Specialist**

Function: The Computer Based Training Specialist works with courseware production team to design, develop, revise, and validate interactive computer based courseware. Uses specialized computer software and/or hardware to develop, integrate and edit instructional text, audio, graphics, animation, and video for interactive presentations. Uses appropriate programming/branching logic and screen layout and remediation/feedback techniques. Implements quality control and review and revision procedures throughout the courseware development process.

Education: High School diploma or GED.

Experience: At least three (3) year of experience performing functional duties for commercial, academic, or DoD communities is required.

**Computer Programmer I**

Function: The Computer Programmer I assists higher level staff by performing elementary programming tasks concerning limited and simple data items and steps which closely follow patterns of previous work done in the organization, e.g. drawing flow charts, writing operator instructions, or coding and testing routines to accumulate counts, tallies, or summaries. May

perform routine programming assignments (as described in Programmer II) under close supervision.

In addition to assisting higher level staff, the Computer Programmer I may perform elementary fact-finding concerning a specified work process, e.g., a file of clerical records which is treated as a unit (invoices, requisitions, or purchase orders, etc.) and then report findings to higher level staff. May receive training in elementary fact-finding. Detailed step-by-step instructions are given for each task, and any deviation must be authorized by a supervisor. Work is closely monitored in progress and reviewed in detail upon completion.

Education: High School diploma or GED; Working towards completing applicable vendor/platform certification (e.g., Microsoft Technology Associate (MTA) with a developer focus, Microsoft Certified Solutions Associate (MCSA), Microsoft Certified Solutions Developer (MCSD), Microsoft Certified Applications Developer (MCAD), Microsoft Certified Database Administrator (MCDBA), Oracle Certified Professional (OCP), other).

Experience: At least one (1) year of software programming experience to include some experience in C++, Java, HTML, CSS, or C#.

**Computer Programmer II**

Function: At this level, initial assignments are designed to develop competence in applying established programming procedures to routine problems. Performs routine programming assignments that do not require skilled background experience but do require knowledge of established programming procedures and data processing requirements, and works according to clear-cut and complete specifications. The data are refined, and the format of the final product is very similar to that of the input, or is well defined when significantly different, i.e., there are few, if any, problems with interrelating varied records and outputs.

Maintains and modifies routine programs, makes approved changes by amending program flow charts, developing detailed processing logic, and coding changes, tests and documents modifications and writes operator instructions, may write routine new programs using prescribed specifications, and may confer with others to clarify procedures, processing logic, etc.

May evaluate simple interrelationships in the immediate programming area, confers with user representatives to gain an understanding of the situation sufficient to formulate the needed change, and implements the change upon approval of the supervisor or higher level staff. Is provided with charts, narrative descriptions of the functions performed, an approved statement of the product desired (e.g., a change in a local establishment report), and the inputs, outputs, and record formats. Reviews objectives and assignment details with higher level staff to insure thorough understanding; uses judgment in selecting among authorized procedures and seeks assistance when guidelines are inadequate, significant deviations are proposed, or when unanticipated problems arise. Work is usually monitored in progress, and all work is reviewed upon completion for accuracy and compliance with standards.

Education: High School diploma or GED; Working towards completing the following certifications:: Microsoft Technology Associate (MTA) with a developer focus, Microsoft Certified Solutions Associate (MCSA), Microsoft Certified Solutions Developer (MCSD), Microsoft Certified Applications Developer (MCAD), Microsoft Certified Database Administrator (MCDBA), Oracle Certified Professional (OCP), or Certified Software Development Professional (CSDP) (Previously known as Certified Software Engineering Professional (CSEP)). At least one (1) Computer Programmer II shall have an active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification.

Experience: At least three (3) years of experience, to include: Software Design, and Development. One (1) year programming experience with one or more of the following programming languages or technologies: C#, Microsoft ASP.NET, Adobe Flash, JavaScript, eXtensible Markup Language (XML), eXtensible Stylesheet for Transformations (XSLT), Standard Generalized Markup Language (SGML), Structured Query Language (SQL). Note: Experience may be concurrent. Adequate experience performing the duties of the labor category as described in the Department of Labor functional description. At least one (1) Computer Programmer II shall have at least one (1) year of experience developing with ADL SCORM deployed.

**Computer Programmer III**

Function: As a fully qualified Computer Programmer, applies standard programming procedures and detailed knowledge of pertinent subject matter in a programming area such as a record keeping operation (supply, personnel and payroll, inventory, purchasing, insurance payments, depositor accounts, etc.); a well-defined statistical or scientific problem; or other standardized operation or problem. Works according to approved statements of requirements and detailed specifications. While the data are clear cut, related, and equally available, there may be substantial interrelationships of a variety of records and several varied sequences of formats are usually produced. The programs developed or modified typically are linked to several other programs in that the output of one becomes the input for another. Recognizes probable interactions of other related programs with the assigned program(s) and is familiar with related system software and computer equipment, and solves conventional programming problems, (In small organizations, may maintain programs that concern or combine several operations, i.e. users, or develop programs where there is one primary user and the others give input.) Performs such duties as developing, modifying, and maintaining assigned programs, designing and implementing modifications to the interrelation of files and records within programs in consultations with higher level staff. Monitors the operation of assigned programs and responds to problems by diagnosing and correcting errors in logic and coding; implements and/or maintains assigned portions of a scientific programming project, applying established scientific programming techniques to well-defined mathematical, statistical, engineering, or other scientific problems usually requiring the translation of mathematical notation into processing logic and code. (Scientific programming includes assignments such as: using predetermined physical laws expressed in mathematical terms to relate one set of data to another; the routine storage and retrieval of field test data, and using procedures for real-time command and control, scientific data reduction, signal processing, or similar areas.) Tests, documents work, writes and maintains operator instructions for assigned programs, and confers with other personnel to obtain or

provide factual data. May carry out fact-finding and programming analysis of a single activity or routine problem, applying established procedures where the nature of the program, feasibility, computer equipment, and programming language have already been decided. Job tasks may require the incumbent to analyze present performance of the program and take action to correct deficiencies based on discussion with the user and consultation with and approval of the supervisor or higher-level staff. This Programmer may assist in the review and analysis of detailed program specifications, and in program design to meet changes in work processes. Works independently under specified objectives; applies judgment in devising program logic and in selecting and adapting standard programming procedures, resolves problems and deviations according to established practices, and obtains advice where precedents are unclear or not available. This Worker, may guide or instruct lower level programmers; supervise technicians and others who assist in specific assignments, works on complex programs under close direction of higher level staff or supervisor, and may assist higher level staff by independently performing moderately complex tasks assigned, and performing complex tasks under close supervision. Work at a level above this is deemed Supervisory or Individual Contributor. Completed work is reviewed for conformance to standards, timeliness, and efficiency.

Education: High School diploma or GED; Completed the following certifications within one and a half year after assuming duties: Microsoft Technology Associate (MTA) with a developer focus, Microsoft Certified Solutions Associate (MCSA), Microsoft Certified Solutions Developer (MCSD), Microsoft Certified Applications Developer (MCAD), Microsoft Certified Database Administrator (MCDBA), Oracle Certified Professional (OCP), or Certified Software Development Professional (CSDP) (Previously known as Certified Software Engineering Professional (CSEP)). At least one (1) Computer Programmer III shall have an active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification.

Experience: At least six (6) years of experience, to include: Software Design, Development, and Test and Evaluation. Four (4) of the six (6)years of programming experience with one or more of the following programming languages or technologies: C#, Microsoft ASP.NET, Adobe Flash, JavaScript, eXtensible Markup Language (XML), eXtensible Stylesheet for Transformations (XSLT), Standard Generalized Markup Language (SGML), Structured Query Language (SQL). Three (3) years of experience, to include: Database development, Web page design, Computer Based Training development, and using .NET tools and .net Integrated Development Environment tools, asp.net, SQL Server, and HTML editor tools. Experience may be concurrent. Adequate experience performing the duties of the labor category as described in the Department of Labor functional description.

**Computer Programmer IV**

Function: The Computer Programmer IV applies expertise in programming procedures to complex programs; recommends the redesign of programs, investigates and analyzes feasibility and program requirements, and develops programming specifications. Assigned programs typically affect a broad multi-user computer system which meets the data processing needs of a broad area (e.g., manufacturing, logistics planning, finance management, human resources, or material management) or a computer system for a project in engineering, research, accounting, statistics, etc. Plans the full range of programming actions to produce several interrelated but

different products from numerous and diverse data elements, which are usually from different sources; solves difficult programming problems, and uses knowledge of pertinent system software, computer equipment, work processes, regulations, and management practices. Performs such duties as: developing, modifying, and maintaining complex programs; designs and implements the interrelations of files and records within programs which will effectively fit into the overall design of the project; works with problems or concepts and develops programs for the solution to major scientific computational problems requiring the analysis and development of logical or mathematical descriptions of functions to be programmed; and develops occasional special programs, e.g. a critical path analysis program to assist in managing a special project. Tests, documents, and writes operating instructions for all work, confers with other personnel to secure information, investigate and resolve problems, and coordinates work efforts.

Performs such programming analyses as: investigating the feasibility of alternate program design approaches to determine the best balanced solution, e.g., one that will best satisfy immediate user needs, facilitate subsequent modification, and conserve resources. Duties include the following: assisting user personnel in defining problems or needs, determining work organization on typical maintenance projects and smaller scale, working on limited new projects, the necessary files and records, and their interrelation with the program or working on large or more complicated projects, and participating as a team member along with other personnel and users, holding responsibility for a portion of the project.

Works independently under overall objectives and direction, apprising the supervisor about progress and unusual complications and modifying and adapting precedent solutions and proven approaches. Guidelines include constraints imposed by the related programs with which the incumbent's programs must be meshed. Completed work is reviewed for timeliness, compatibility with other work, and effectiveness in meeting requirements. May function as team leader or supervise a few lower level programmers or technicians on assigned work.

Education: High School diploma or GED; Completed the following certifications within one and a half year after assuming duties: Microsoft Technology Associate (MTA) with a developer focus, Microsoft Certified Solutions Associate (MCSA), Microsoft Certified Solutions Developer (MCSD), Microsoft Certified Applications Developer (MCAD), Microsoft Certified Database Administrator (MCDBA), Oracle Certified Professional (OCP), or Certified Software Development Professional (CSDP) (Previously known as Certified Software Engineering Professional (CSEP)). At least one (1) Computer Programmer IV must have an active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification.

Experience: At least eight (8) years of experience, to include: Software Design, Development, and Test and Evaluation. Five (5) years programming experience with one or more of the following programming languages or technologies: C++, Microsoft .NET, C#, Microsoft ASP.NET, Adobe Flash, JavaScript, eXtensible Markup Language (XML), eXtensible Stylesheet for Transformations (XSLT), Standard Generalized Markup Language (SGML), Structured Query Language (SQL). Four (4) years of experience, to include: Database development, Web page design, Computer Based Training development, and using .NET tools and .net Integrated Development Environment tools, asp.net, SQL Server, and HTML editor

tools. Experience may be concurrent. Adequate experience performing the duties of the labor category as described in the Department of Labor functional description.

**Computer Scientist**

Function: Applies knowledge of computer science concepts and techniques, mathematics, and methods of statistical analysis to develop and apply automated solutions to engineering, scientific, or business data acquisition and management problems. Uses mathematical, statistical, and scientific logic to identify conceptual or theoretical solutions to problems of automated data processing (ADP) hardware or software systems design and operations. Analyzes and formulates architectural and functional specifications, interfaces, and data structures. Researches applications for ADP hardware, software, and operating systems. Writes, modifies, and adapts computer programs in machine level, assembly, and third or fourth generation programming languages.

Education: BS or BA degree in computer science, computer engineering, mathematics, or information systems (not management). An active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification is required for one (1) Computer Scientist.

Experience: At least one (1) year of experience performing computer scientist functions in one or more of the following programming languages or technologies: C++, Microsoft .NET, C#, Microsoft ASP.NET, Adobe Flash, JavaScript, eXtensible Markup Language (XML), eXtensible Stylesheet for Transformations (XSLT), Standard Generalized Markup Language (SGML), Structured Query Language (SQL).

**Computer Scientist, Senior**

Function: Applies knowledge of computer science concepts and techniques, mathematics, and methods of statistical analysis to develop and apply automated solutions to engineering, scientific, or business data acquisition and management problems. Uses mathematical, statistical, and scientific logic to identify conceptual or theoretical solutions to problems of automated data processing (ADP) hardware or software systems design and operations. Analyzes and formulates architectural and functional specifications, interfaces, and data structures. Researches applications for ADP hardware, software, and operating systems. Writes, modifies, and adapts computer programs in machine level, assembly, and third or fourth generation programming languages. May act as team leader or supervisor, developing project plans, guidelines, or controls, and directing the work of other computer scientists, specialists, and technicians.

Education: BS or BA degree in computer science, computer engineering, mathematics, or information systems (not management).

Experience: At least three (3) years of computer science experience. At least one (1) year of the foregoing experience shall have been as a team leader or supervisor. At least one (1) year of the foregoing experience shall have consisted of performing computer scientist functions in one or more of the following programming languages or technologies: C++, Microsoft .NET, C#,

Microsoft ASP.NET, Adobe Flash, JavaScript, eXtensible Markup Language (XML), eXtensible Stylesheet for Transformations (XSLT), Standard Generalized Markup Language (SGML), Structured Query Language (SQL).

**Computer Systems Analyst I**

Function: Carries out fact finding and analyses as assigned, (usually of a single activity or a routine problem); applies established procedures where the nature of the system, feasibility, computer equipment and programming language have already been decided; may assist a higher level systems analyst by preparing the detailed specifications required by computer programmers from information developed by the higher level analyst, and may research routine user problems and solve them by modifying the existing system when the solutions follow clear precedents. When cost and deadline estimates are required, results receive closer review.

The supervisor defines objectives, priorities, and deadlines. Works independently; adapts guides to specific situations; resolve problems and deviations according to established practices; and obtain advice where precedents are unclear or not available. Completed work is reviewed for conformance to requirements, timeliness, and efficiency. This position may supervise technicians and others who assist in specific assignments. Work at a level above this is deemed Supervisory or Individual Contributor.

Education: High School diploma or GED; An active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification is required for one (1) Computer Systems Analyst I.

Experience: At least three (3) years of experience translating functional objectives into system designs, consolidating complex data from separate sources into analytic tools, and optimizing tools and processes. Knowledge of Shareable Content Object Reference Model (SCORM) standards and experience designing CBT software OR identifying patterns of anomaly, optimization candidates, or leading system failure indicators in Naval maintenance data using Fleet provided scheduled and event driven data.

**Computer Systems Analyst II**

Function: Applies systems analysis and design skills in an area such as a record keeping or scientific operation. A system of several varied sequences or formats is usually developed, e.g. the analyst develops systems for maintaining depositor accounts in a bank, maintaining accounts receivable in a retail establishment, maintaining inventory accounts in a manufacturing or wholesale establishment, or processing a limited problem in a scientific project. This position requires competence in most phases of system analysis and knowledge of pertinent system software and computer equipment and of the work processes, applicable regulations, workload, and practices of the assigned subject-matter area. Job duties require the incumbent to be able to recognize probable interactions of related computer systems and predict impact of a change in assigned system.

The Computer Systems Analyst II reviews proposals which consist of objectives, scope, and user expectations; gathers facts, analyzes data, and prepares a project synopsis which compares

alternatives in terms of cost, time, availability of equipment and personnel, and recommends a course of action; upon approval of synopsis, prepares specifications for development of computer programs. Duties also include the ability to determine and resolve data processing problems and coordinate the work with program, users, etc. Orients user personnel on new or changed procedures, may conduct special projects such as data element and code standardization throughout a broad system, working under specific objectives and bringing to the attention of the supervisor any unusual problems or controversies.

In this position, the incumbent works independently under overall project objectives and requirements, and apprises supervisor about progress and unusual complications. Guidelines usually include existing systems and the constraints imposed by related systems with which the incumbent's work must be meshed. Adapts design approaches successfully used in precedent systems, works on a segment of a complex data processing scheme or broad system, as described for Computer Systems Analyst, level III, works independently on routine assignments and receives instructions and guidance on complex assignments. Work is reviewed for accuracy of judgment, compliance with instructions, and to insure proper alignment with the overall system. Completed work is reviewed for timeliness, compatibility with other work, and effectiveness in meeting requirements. This analyst may provide functional direction to lower level assistants on assigned work.

Education: High School diploma or GED. An active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification is required for at least two (2) Computer Systems Analyst II.

Experience: At least six (6) years of experience defining requirements, translating functional objectives into system designs, consolidating complex data from separate sources into analytic tools, and optimizing tools and processes. Knowledge of Shareable Content Object Reference Model (SCORM) standards or three (3) years of experience in Naval maintenance systems. At least two (2) Computer Systems Analysts II shall have experience in translating requirements for Consolidated Afloat Networks and Enterprise Services (CANES), Common PC Operating System Environment (COMPOSE), and/or Navy Information Application Product Suite (NIAPS) deployed ship systems into data repositories; OR optimizing media content for distribution across Naval IT infrastructure through blended streaming, pre-loading, background loading, and compression; OR integration of COTS operational user manuals, systems engineering data/schematics, test/use cases, or Navy Fleet feedback into IETMs or CBT with Level 2+ user interactivity ; OR identifying patterns of anomaly, optimization candidates, or leading systems failure indicators in Naval maintenance data using Fleet provided scheduled and event driven data.

**Computer Systems Analyst III**

Function: Applies systems analysis and design techniques to complex computer systems in a broad area such as manufacturing, finance management, engineering, accounting, or statistics, logistics planning, material management, etc. Usually, there are multiple users of the system; however, there may be complex one-user systems, e.g., for engineering or research projects. This position requires competence in all phases of systems analysis techniques, concepts, and methods and knowledge of available system software, computer equipment, and the regulations, structure,

techniques, and management practices of one or more subject-matter areas. Since input data usually come from diverse sources, this worker is responsible for recognizing probable conflicts and integrating diverse data elements and sources, and produces innovative solutions for a variety of complex problems. The Computer Systems Analyst III maintains and modifies complex systems or develops new subsystems such as an integrated production scheduling, inventory control, cost analysis, or sales analysis record in which every item of each type is automatically processed through the full system of records. The incumbent guides users in formulating requirements, advises on alternatives and on the implications of new or revised data processing systems, analyzes resulting user project proposals, identifies omissions and errors in requirements and conducts feasibility studies. This analyst recommends optimum approach and develops system design for approved projects, interprets information and informally arbitrates between system users when conflicts exist. This worker may serve as lead analyst in a design subgroup, directing and integrating the work of one or two lower level analysts, each responsible for several programs. Supervision and nature of review are similar to level II; existing systems provide precedents for the operation of new subsystems.

Education: High School diploma or GED. An active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification is required for one (1) Computer Systems Analyst III.

Experience: At least ten (10) years of experience defining requirements, translating functional objectives into systems designs, consolidating complex data from separate sources into analytic tools, and optimizing tools and processes. Knowledge of Shareable Content Object Reference Model (SCORM) standards or three (3) years of experience in Naval maintenance systems. Required experience includes four (4) years or more in translating requirements for Consolidated Afloat Networks and Enterprise Services (CANES), Common PC Operating System Environment (COMPOSE), and/or Navy Information Application Product Suite (NIAPS) deployed ship systems into data repositories; OR optimizing media content for distribution across DoD IT infrastructure through blended streaming, pre-loading, background loading, and compression; OR integration of COTS operational user manuals, systems engineering data/schematics, test/use cases, or Military Maintainer feedback into IETMs or CBT with Level 2+ user interactivity ; OR identifying patterns of anomaly, optimization candidates, or leading systems failure indicators in Naval maintenance data using Fleet provided scheduled and event driven data.

**Information Assurance Analyst**

Function: Provides technical support involving evaluation, integration, fielding, maintenance, testing, and operation of CEAT networks, systems and subsystems. Assist the development of system IA documentation to support certification of compliance to applicable standards including DIACAP and Risk Management Framework (RMF).

Education: BS or BA degree in computer science, cyber security, information systems, information security, computer engineering, or relevant technical discipline.

Experience: At least four (4) years of practical CEAT computer security experience in secure network and system design, analysis, procedure/test generation, test execution and implementation of computer/network security mechanisms.

OR

Education: High School diploma or GED.

Experience: At least eight (8) years of practical CEAT computer security experience in secure network and system design, analysis, procedure/test generation, test execution and implementation of computer/network security mechanisms.

**Information Assurance Analyst, Senior**

Function: Serve as a team leader for the support of tasking that involves the analysis of the information assurance posture of CEAT networks and systems in support of system certification and accreditation. This support would include analysis of CEAT networks/systems; development of secure networks/systems; and integration, testing, and maintenance of the networks/systems. Lead the development of system IA documentation to support certification of compliance to applicable standards including DIACAP, Risk Management Framework (RMF), DCID 6/9, and ICD 503. Apply knowledge of Information Security policies and procedures to process and protect DoD classified information. Apply knowledge of policies, regulations, and Executive Orders in the marking, handling, and dissemination of classified material and information and creation and use of Security Classification Guides (SCGs). Apply knowledge of policy, regulations and Executive Orders in the release of U.S. Government information. Develop, participate in, and/or provide Information Security training and awareness.

Education: BS or BA degree in computer science, cyber security, information systems, information security, or computer engineering.

Experience: At least seven (7) years of practical CEAT computer security experience in secure network and system design, analysis, procedure/test generation, test execution and implementation of computer/network security mechanisms. At least three (3) of the seven (7) years of experience applying information security and Navy directed IT systems accreditation to Fleet fielded systems.

OR

Education: AS or AA degree in computer science, cyber security, information systems or computer engineering.

Experience: At least ten (10) years of practical CEAT computer security experience in secure network and system design, analysis, procedure/test generation, test execution and implementation of computer/network security mechanisms. At least three (3) of the ten (10) years of experience applying information security and Navy directed IT systems accreditation to Fleet fielded systems.

**Logistician II**

Function: Performs various tasks related to the development, operation, evaluation, and improvement of weapon systems supportability and/or maintainability programs and information systems. Works on logistics and maintainability programs and with logistics and maintenance control organizations on issues such as: technical evaluation and identification of weapons systems logistics requirements and resources; development of logistics support and maintainability programs or plans; systems acquisition requirements analysis; budgetary or financial analysis and control; life cycle cost analysis and control; weapons systems hardware and software standardization and compatibility; Integrated Logistics Support (ILS)/Reliability & Maintainability (R&M) program test and evaluation planning and execution; and, ILS/R&M program management analysis. Collects, compiles, analyzes, investigates, researches, or applies logistics, maintenance, acquisition, or financial data and information. Develops, modifies, prepares, or validates documentation in relation to automated logistics or maintenance data reporting systems, and management information systems.

Education: BS or BA degree; Working towards Professional Logistics Certification. An active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification is required within 90 days of task start.

Experience: At least three (3) years of experience in defense life-cycle (acquisition) logistics support of electronic systems, to include logistics principles, practices, and processes. Knowledge of Navy 3M system, including PMS schedules, feedback reports, parts and materials. Experience analyzing 3M data and shipboard equipment and systems.

OR

Education: High School diploma or GED. An active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification is required within 90 days of task start.

Experience: At least four (4) year of experience in defense life-cycle (acquisition) logistics support of electronic systems, to include logistics principles, practices, and processes. Knowledge of Navy 3M system, including PMS schedules, feedback reports, parts and materials. Experience analyzing 3M data and shipboard equipment and systems.

**Logistician III**

Function: Performs various tasks related to the development, operation, evaluation, and improvement of weapon systems supportability and/or maintainability programs and information systems. Works on logistics and maintainability programs and with logistics and maintenance control organizations on issues such as: technical evaluation and identification of weapons systems logistics requirements and resources; development of logistics support and maintainability programs or plans; systems acquisition requirements analysis; budgetary or financial analysis and control; life cycle cost analysis and control; weapons systems hardware and software standardization and compatibility; Integrated Logistics Support (ILS)/Reliability &

Maintainability (R&M) program test and evaluation planning and execution; and, ILS/R&M program management analysis. Collects, compiles, analyzes, investigates, researches, or applies logistics, maintenance, acquisition, or financial data and information. Develops, modifies, prepares, or validates documentation in relation to automated logistics or maintenance data reporting systems, and management information systems.

Education: BS or BA degree; Working towards Professional Logistics Certification. An active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification is required.

Experience: At least six (6) years of experience in defense life-cycle (acquisition) logistics. At least three (3) of the six (6) years of experience working with Navy 3M system, including PMS schedules, feedback reports, parts and materials. Experience analyzing 3M data and shipboard equipment and systems.

OR

Education: High School diploma or GED; Working towards Professional Logistics Certification.

Experience: At least eight (8) years of experience in defense life-cycle (acquisition) logistics. At least three (3) of the eight (8) years of experience working with Navy 3M system, including PMS schedules, feedback reports, parts and materials. Experience analyzing 3M data and shipboard equipment and systems.

**Project Analyst**

Function: Analyzes project requirements in the areas of business management, financial management, program scheduling, milestone tracking, critical path analyses, and support requirements, and performs other related analyst/management activities required for successful completion of required tasks. Assists with impact studies, cost/benefit analyses, dependency models, and project tracking methodologies to ensure the success and efficiency assigned projects. Provides support for critical operations related to Comptroller Functions, Acquisition, Navy ERP training and implementation, and Navy ERP role mapping.

Education: BS or BA degree in business, management, or public administration.

Experience: At least six (6) years experience in large and complex problems associated to major weapons systems. Minimum two (2) years experience of the last six (6) years must have been as a team leader. Demonstrate experience in cost/benefit analysis, quality control, successful completion of critical path events and project tracking. Familiarity with SECNAV, OPNAV and OSD forms related to PPBS, Military Interdepartmental Procurement Requests, Work requests, Requisitions, Contract Data Requirements List, and DD 254.

OR

Education: AS or AA degree in business or management.

Experience: At least ten (10) years of experience in large and complex problems associated to major weapons systems. Minimum two (2) years of experience of the last ten (10) years must have been as a team leader. Demonstrate experience in cost/benefit analysis, quality control, successful completion of critical path events and project tracking. Familiarity with SECNAV, OPNAV and OSD forms related to PPBS, Military Interdepartmental Procurement Requests, Work requests, Requisitions, Contract Data Requirements List, and DD 254.

OR

Education: High school diploma or GED

Experience: At least fourteen (14) years experience in large and complex problems associated to major weapons systems. Minimum four (4) years experience of the last fourteen (14) years must have been as a team leader. Demonstrate experience in cost/benefit analysis, quality control, successful completion of critical path events and project tracking. Familiarity with SECNAV, OPNAV and OSD forms related to PPBS, Military Interdepartmental Procurement Requests, Work requests, Requisitions, Contract Data Requirements List, and DD 254.

**Software Engineer, Journey Level**

Function: Responsible for the detailed design, implementation, and testing of subsystems and system components. A software engineer is able to build a wide variety of software subsystems and components efficiently and effectively, given only a requirements specification and constraints. A software engineer is able to develop and sustain these subsystems and software components in complex, multi-vendor, multi-platform environments.

Education: BS or BA degree in computer science, computer engineering, or engineering. An Active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification is required.

Experience: At least eight (8) years of experience in the detailed design, implementation, and testing of subsystems and system components. Demonstrated knowledge of Navy's 3M system and Planned Maintenance System (PMS) is required. Four (4) of the eight (8) years to include demonstrated experience with XML development/integration within the DoN.

**Systems Analyst, Journey Level**

Function: Collects information to analyze and evaluate. Performs logical and physical system design and reviews and prepares system documents and specifications. Conducts technical research on system upgrades to determine feasibility, cost, time required, and compatibility with system. Prepares reports, studies and documentation. Delivers presentations and participates in meetings. Works on special problem areas; administers complex areas of the network, security analysis and planning.

Education: BS or BA in computer science, computer engineering, information systems, , physical science, engineering, or business field. At least one (1) Systems Analyst, Journey Level must have an active NAVSEA Reliability Centered Maintenance (RCM) Level 1 certification.

Experience: At least six (6) years of experience with systems analysis, software design, software development and database administration. Demonstrated knowledge of quality assurance, quality control, and independent verification and validation techniques. Experience working independently and as part of a team in researching data, developing analytical techniques and methodologies. Demonstrated knowledge of system acquisition practices required to design, develop, integrate, test and manufacture a major system. Performs tasks with little or no guidance. At least one Systems Analyst, Journey Level must demonstrate two (2) or more years' experience with data analytics.

OR

Education: AS or AA in computer science, computer engineering, information systems, physical science, engineering, or business field.

Experience: At least ten (10) years of experience with systems analysis, software design, software development, system support, and database administration. Demonstrated knowledge of quality assurance, quality control, and independent verification and validation techniques. Experience working independently and as part of a team in researching data, developing analytical techniques and methodologies. Demonstrated knowledge of system acquisition practices required to design, develop, integrate, test and manufacture a major system. Performs tasks with little or no guidance. At least one Systems Analyst, Journey Level must demonstrate two (2) or more years' experience with data analytics.

OR

Education: High school diploma or GED.

Experience: At least fourteen (14) years of experience with systems analysis, software design, software development, system support, and database administration. Demonstrated knowledge of quality assurance, quality control, and independent verification and validation techniques. Experience working independently and as part of a team in researching data, developing analytical techniques and methodologies. Demonstrated knowledge of system acquisition practices required to design, develop, integrate, test and manufacture a major system. Performs tasks with little or no guidance. At least one Systems Analyst, Journey Level must demonstrate two (2) or more years' experience with data analytics.

**Systems Analyst, Junior**

Function: Performs research, preparation of logical and physical system designs; and reviews and prepares system documents and specifications. Prepares reports, studies and documentation. Delivers presentations and participate in meetings. Makes recommendations in task areas. Performs tasks under supervision.

Education: BS or BA in computer science, computer engineering, information systems, physical science, engineering, or business field.

Experience: No experience required.

**Systems Engineer, Journey Level**

Function: Has programmatic or technical knowledge identifying, formulating, designing and/or testing practical solutions to engineering problems and guide the engineering development of modern systems; and to employ systems engineering methods and tools in the development of systems.

Education: BS or BA in systems engineering, computer science, computer engineering, information systems, logistics, engineering discipline. At least two (2) Systems Engineer, Journey Level must be RCM Level 1 or greater certified.

Experience: At least three (3) years experience performing functional duties. At least one (1) of the three (3) years experience analyzing Naval ship systems integration, automated logistics, or air/ship integration.

**Systems Engineer, Junior**

Function: Has programmatic or technical knowledge identifying, formulating, designing and/or testing practical solutions to engineering problems and guide the engineering development of modern systems; and to employ systems engineering methods and tools in the development of systems.

Education: BS or BA in systems engineering, computer science, computer engineering, information systems, logistics, or an engineering discipline.

Experience: No experience required.

**Technical Writer II**

Function: The Technical Writer revises or writes material that is mostly standardized for reports, manuals, briefs, proposals, instruction books, catalogs, and related technical and administrative publications concerned with work methods and procedures, and installation, operation, and maintenance of machinery and other equipment. The incumbent receives assignment and technical information from a supervisor or senior writer, may be provided notes or manuals containing operating procedures and details, and may observe production, developmental or experimental activities to expand or verify the provided operating procedures and details.

This worker accesses manufacturers' catalogs, drawings and other data relative to operation, maintenance, and service of equipment, may have access to blueprints, sketches, drawings, parts lists, specifications, mockups, and product samples to integrate and delineate technology, operating procedure, and production sequence and detail. Organizes material and completes writing assignment according to set standards regarding order, clarity, conciseness, style, and terminology, may maintain records and files of work and revisions, may select photographs,

drawings, sketches, diagrams, and charts to illustrate material, assist in laying out material for publication, and arrange for typing, duplication and distribution of material. This writer may draft speeches, articles, and public or employee relations releases, or specialize in writing material regarding work methods and procedures.

Education: High School diploma or GED.

Experience: At least four (4) years of experience preparing technical, training, or information system related materials for use within the DoD environment.

**Training Specialist II**

Function: Researches and analyzes new or revised technical documentation and information concerning advances in military weapons systems and support systems technology. Designs, develops, and prepares structured training manuals, presentation materials, and courses of study related to the operation or maintenance of military weapon systems and support systems. Works to implement program use of the training courses and materials that are developed.

Education: BS or BA degree in Education, English, Psychology, Human Factors, Multimedia, or User Interface/Experience. Working towards training certification as a Navy Master Training Specialist (MTS).

Experience: At least five (5) years of experience establishing training needs, developing goals and objectives, developing training programs, and applying the instructional system development (ISD) process.

## ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| 3M | Maintenance Material Management |
| AAP | Abbreviate Acquisition Program |
| ACAT | Acquisition Category |
| ADL | Advanced Distributed Learning |
| ADP | Automated Data Processing |
| ASN | Assistant Secretary of the Navy |
| BMMP | Business Management Modernization Program |
| C&A | Certification and Accreditation |
| C4I | Command, Control, Communications, Computers, and Intelligence |
| CACs | Common Access Cards |
| CANES | Consolidated Afloat Networks and Enterprise Services |
| CBT | Computer-based Training |
| CCA | Clinger-Cohen Act |
| CDMD-OA | Configuration Data Management Database-Open Architecture system |
| CIO | Command Information Officer |
| CND | Computer Network Defense |
| COMSEC | Information Assurance and Communications Security |
| CONUS | Contiguous United States |
| COR | Contracting Officer's Representative |
| COTS | Commercial Off-the-Shelf |
| CSDP | Certified Software Development Professional |
| CSEP | Certified Software Engineering Professional |
| CSP | Contract Surveillance Plan |
| CTT | Cryptologic Technician Technical |
| CUI | Controlled Unclassified Information |
| CWS | Compressed Work Schedule |
| DADMS | DoN Application Database Management System |
| DDG | Guided Missile Destroyer |
| DISA | Defense Information Systems Agency |
| DISN | Defense Information System Network |
| DoD | DoD or DOD – Department of Defense |
| DoDD | Department of Defense Directive |
| DoDI | Department of Defense Instruction |
| DoE | U.S. Department of Education |
| DoN | Department of the Navy |
| DTD | Document Type Definitions |
| DTM | Directive-Type Memorandum |
| ECMRA | Enterprise-Wide Contractor Manpower Reporting Application |
| EIA | Electronics Industries Association |
| eMass | Enterprise Mission Assurance Support Service |
| ET | Electronics Technician |
| EW | Electronic Warfare Technician |
| FAM | Functional Area Manager |

| | |
|---|---|
| FC | Fire Controlman |
| FIPS PUB | Federal Information Processing Standards Publications |
| FTR | Federal Travel Regulations |
| FY | Fiscal Year |
| GFI | Government Furnished Property/Information |
| GFS | Government-Furnished Support |
| GIG | Global Information Grid |
| GOTS | Government Off-the-Shelf |
| IA | Information Assurance |
| IEEE | Institute of Electrical & Electronics Engineers |
| IETM | Interactive Electronic Technical Manuals |
| ILS | Integrated Logistics Support |
| IP | Internet Protocol |
| IPT | Integrated Process Team |
| ISEAs | In Service Engineering Agents |
| ISNS | Integrated Shipboard Network System |
| ISP | Inspection System Plan |
| IT | Information Technology |
| ITPR | Information Technology Purchase Request |
| LMS | Learning Management System |
| LOA | Letter of Authorization |
| MCAD | Microsoft Certified Applications Developer |
| MCALMS | Marine Corps Aviation Learning Management System |
| MCDBA | Microsoft Certified Database Administrator |
| MCSD | Microsoft Certified Solutions Developer |
| MIP | Maintenance Index Page |
| MIS | Management Information System |
| MOA | Memorandum of Agreement |
| MRC | Maintenance Requirement Cards |
| NAVAIR | Naval Air Systems Command |
| NAVSEALOGCENs | NAVSEA Logistics Centers |
| NAWCAD | Naval Air Warfare Center - Aircraft Division |
| NIAPS | Navy Information and Application Product Suite |
| NIOC | Navy Information Operations Command |
| NISPOM | National Industrial Security Program Operating Manual |
| NIST | National Institute of Standards and Technology |
| NKO | Navy Knowledge Online |
| NMCI | Navy Marine Corps Intranet |
| NPE | Navy PMS Editor |
| NR KPP | Net Ready Key Performance Parameter |
| NSDD | National Security Decision Directive |
| NSIV | NAVAIR Standard IETM Viewer |
| NSS | National Security Systems |
| NWHs | Normal Working Hours |
| OARS | Open Architectural Retrieval System |
| OCONUS | Outside of Continental United States |

| | |
|---|---|
| OCP | Oracle Certified Professional |
| ODC | Other Direct Costs |
| OPNAV | Office of the Chief of Naval Operations |
| OPSEC | Operations Security |
| OSD | Office of the Secretary of Defense |
| PCO | Procuring Contracting Officer |
| PK | Public Key |
| PKI | Public Key Infrastructure |
| PMS | Planned Maintenance System |
| PPP | Program Protection Plan |
| PPSM | Ports, Protocols, and Services Management |
| PSCs | Product Service Codes |
| QA | Quality Assurance |
| QASP | Quality Assurance Surveillance Plan |
| R&M | Reliability & Maintainability |
| RCM | Reliability Centered Maintenance |
| RMF | Risk Management Framework |
| SAAR-N | Systems Authorization Access Request Navy |
| SCGs | Security Classification Guides |
| SCORM | Shareable Content Object Reference Model |
| SDP | Software Development Plan |
| SENAVINST | Secretary of the Navy Instruction |
| SGML | Standard Generalized Markup Language |
| SHIPALTs | Ship Alterations |
| SOW | Statement of Work |
| SP | Special Publication |
| SPII | Software Process Improvement Initiative |
| SPOT | Synchronized Pre-Deployment & Operational Tracker |
| SQL | Structured Query Language |
| TDL | Technical Direction Letters |
| TFRs | Tailored Force Revisions |
| TYCOM | Type Commanders |
| UTNProtect | Unclassified Trusted Network Protection |
| VPN | Virtual Private Network |
| WRA | Web Risk Assessment |
| XSL-FO | eXtensible Stylesheet Language-Formatting Objects |
| XML | eXtensible Markup Language |
| XSLT | eXtensible Stylesheet for Transformations |